FORESTRY ABSTRACTS

VOLUME VI. 1944-45

INDEXES

		PAGE
1.	AUTHORS - - - - - - - -	2
2.	SPECIES - - - - - - - -	11
3.	SUBJECT - - - - - - - -	19
4.	GEOGRAPHICAL - - - - - -	24

AUTHORS' INDEX

Aartsen, J. P. van, 74
Acatay, A., 261
Acosta Solís, M., 83
Adair, W., 124
Adams, W. R., and Chapman, G. L., 53
Adamson, R. S., Easterhuysen, E., and Phillips, E. P., 15
Aguiar, J. F. A., 22
Aguilar, G. J. I., 109, 252
Åhlman, S., 78
Ahmad, N., and Karnik, M. G., 238
Ainley, A. D., and Sharp, F. L., 246
Airy Shaw, H. K., 18
Akindinov, M. V., 96, 173.
Al'benski, A. V., 143
Aldous, C. M., and Aldous, S. E., 47
Aldous, S. E., *see* Aldous, C. M.
Aldridge, C., 37
Allard, H. A., 224, 228
Allen, C. K., 83
Allen, G. S., 51
Allwood, A. W., 99
Altpeter, L. S., 7
Amadon, C. H., 177
Amidon, G. B., and LeBarron, R. K., 172
Amirikian, A., 42
Ammon, R. M., 119
Ananda Rau, S., 261
Anderson, A. B., 168
Anderson, C. M., 246
Anderson, D. A., and Balthis, R. F., 197
— *see* Balthis, R. F.
Anderson, M. L., 269
Anderson, R. B., 177
Anderson, R. F., 260
Andersson, E., 145, 147
Andersson, Y., 245
Andrews, H. N., 5
— and Pannell, E., 5, 6
Andronov, N. N., 141
Antonoff, G., 173
Antonoff, M., *see* Kollmann, F.
Aries, R. S., 182, 186, 253
Ark, P. A., 115, 257
Arkhangel'skiĭ, G., 49
Arnold, W. P., and Boller, E. R., 35
Ashe, G. H., 19
Atwood, C. E., 19
Aubert, S., 82, 151
Aubréville, M. A., 180
Aun, H., *see* Henning, F. W.
Austin, T. S., *see* Shadle, A. R.
Avery-Fowler, J. A., 235
Azevedo, P. da R., 35

Baader, G., 86
Baak, W., 173
Badcock, E. C., 80
Baehni, C., 81
Bagchee, K. D., 191
Bahrfeldt, K., and Spoon, W., 102
Bailey, I. W., 16
— and Nast, C. G., 77
Bailey, S. D., *see* Klein, L.
Bailey, W. A., 156, 183
Bailey, W. W., *see* Nestler, R. B.
Bakelite, Ltd., 99
Baker, S. B., *see* Kulka, M.
Balabukh, L. I., 242
Balandin, D. A., and Kolesnikov, B. P., 185
Balavoine, P., and Terrier, J., 108
Balch, R. E., 49
Balden, F. E., 253
Baldwin, J. T., 148
Ball, R. S., 107
Bally, W., 73
Balthis, R. F., and Anderson, D. A., 256
— *see* Anderson, D. A.
Banda, C. F., 57
Banerji, I., 78
Bang, F., 159
Bannan, M. W., 94
Barbour, W. R., 137
Barghoorn, E. S., and Linder, D. H., 225
Barkley, F. A., 227
Barnes, J. S., 98
Barnes, J. W., 159
Barth, J., 205
Bartl, K., 41
Barton, W. W., *see* Stott, C. B.
Basheer Ahmed Khan, K., *see* Thirumalachar, M. J.
Basov, G. F., 140
Batham, H. N., 186
Bausor, S. C., *see* Curtis, C. C.
Bavier, B., 123
Bax, S. N., 55
Bayer, A. W., 149
Bayne, A., 201
Bayon, H. P., 177, 187
Beard, J. S., 79, 149, 153
Becker, G., 29, 194, 239
Bedard, W. D., *see* Evenden, J. C.
Beetle, A. A., 12
Beglinger, E., *see* Harris, E. E.
Behre, C. E., 50
Beilmann, A. P., 142
Beirne, B. P., 85
Beketovski, D. N., 226
Bender, F., and Schnetzler, K., 99
Bennett, L. J., English, P. F., and Watts, R. L., 154
Bennett, W. L., 53
Bennie, J., 177
Bensman, S. A., and Proshkin, G. N., 40
Berget, Guinier, and Perrot, 252
Berkeley, G. H., 45
Berliner, J. F. T., 31, 33, 99, 246
Bernier, G. H., 44, 188, 189, 190
Berriman, C. R., *see* Weidman, R. H.
Berthelot, C., 248
Bertrand, G., and Brooks, G., 168
Bess, H. A., 28
Betts, H. S., 166
Bilhuber, P. H., 106
Birkinshaw, J. H., Bracken, A., and Findlay, W. P. K., 225
Biswas, K., 221
Biswell, H. H., Foster, J. E., and Southwell, B. L., 56
— *see* Campbell, R. S.
Björkman, E., 73
Blackman, M. W., 85
Blackwell, E., 14
Blair, I. D., 80
Blair, R., *see* Glasgow, R. D.
Bleton, C. A., and Fieuzet, L., 84
Blew, J. O., 104
Bliss, E. S., 17
Boals, R. B., 254
Bochantseva, Z. P., 226
Bock, E., *see* Menger, A.
Boehm, R. M., 245
Boer, A. G., *see* Ruzicka, L.
Böhme, B., 184
Boller, E. R., *see* Arnold, W. P.
Bonck, J., and Penfound, W. T., 218
Bond, D. W., 256
Bond, W. E., *see* Reynolds, R. R.
Bond, W. E. T., 233
Bondar, G., 19
Bonner, J., 142
Bonney, M. C., *see* Harper, F. B.
Booth, H. A., 267
Borel, W., 228
Borglin, J. N., 177
Bose, S. R., 217, 251
Bosq, J., 48
Bostrum, E., 177
Boswell, J. C., 141
Boucher, G., 6
Boughton, R. V., 188
Boulton, E. H. B., and Jay, B. A., 93
Boureau, E., 219
Bourne, R., 270
Boutaric, M., 252
Boyce, J. S., 15
Bracken, A., *see* Birkinshaw, J. H.
Bracken, J., 121
Brasfield, T. W., 80
Brasnett, N. V., 230
Bratton, A. W., 174
Braude, R., 186
Brauns, F. E., and Lewis, H. F., 237
— *see* Brookbank, E. B.
— *see* Buchanan, M. A.
— *see* Lewis, H. F.
Brauns, O., Holst, G., Johnson, T., Nevrell, T. H., and Waldenström, E., 212
Brenner, L. G., 12
— *see* Erickson, R. O.
Briegleb, P. A., 119
— *see* Cowlin, R. W.
Brierley, P., 259
Bromée, F., 137
Bromley, S. W., *see* Felt, E. P.
Brookbank, E. B., Brauns, F. E., Lewis, H. F., and Buchanan, M. A., 27
Brooks, G., *see* Bertrand, G.
Brophy, M. J., 104
Broughton, R. V., 42
Brown, A. W. A., and MacKay, M. R., 18
Brown, D. W., 176
Brown, E., 137
Brown, R. C., 261
— and Sheals, R. A., 118
Brown, W. J., 84
Browne, R. Y., *see* Buckman, S. J.

Brownlie, D., 253
Bruce, H. D., 113
Brumleve, C. C., 242
Bruson, H. A., and Rainey, J. L., 31
Bruyne, N. A. de, 31
Bryan, J., 29
Bryant, G. E., 196
Bubl, J. L., *see* Saeman, J. F.
Buchanan, M. A., and Brauns, F. E., 168
— Lewis, H. F., and Kurth, E. F., 237
— *see* Brookbank, E. B.
— *see* Lewis, H. F.
Buchanan, T. S., 92
Buchholz, E., 183
Buckman, S. J., Pera, J. D., and Browne, R. Y., 34
Buechner, H. K., 224
Buevskiĭ, A., and Podgornykh, A., 101
Bugie, E., *see* Waksman, S. A.
Bührer, H., 119
Bull, H., and Muntz, H. H., 22
Burger, H., 122, 142, 161
Burns, G. P., 215
Butler, B., *see* Stephens, C. G.
Butovitsch, V., *see* Trägårdh, I.
Buttrick, P. L., 265

Cain, L. G., *see* Cain, S. A.
Cain, S. A., 5, 220
— and Cain, L. G., 148
Caius, J. F., 184
Čajlahjan, M. H., and Tureckaja, R. H., 141
Callaham, J. R., 236
Cameron, A. E., 48
Campbell, R. A., 201
Campbell, R. S., 56
— and Biswell, H. H., 183
Campbell, W. A., *see* Davidson, R. W.
Campbell, W. G., and Packman, D. F., 95
Campi, M. D., 193
Camsell, C., 54
Canfield, R. H., 38, 106
Cannobbio, A., 203
Carmelich, J. N. F., 163
Caroselli, N. E., *see* Howard, F. L.
Carr, J. H., *see* Mehringer, F. J.
Carswell, T. S., 102
Carter, W., 118
Casselman, R., 100
Cave, C. J. P., 6
Chadwick, L. C., 23
Chalk, L., 167
Chalyuk, E., 176
Chambard, P., 184
Chamberland, H. J., 100
Champion, F. J., 242
Chapman, A. G., 231
Chapman, G. L., *see* Adams, W. R.
Chapman, H. H., 86, 266
Chapman, R. A., *see* Pessin, L. J.
Charaux, C., and Rabaté, J., 217
Chatterjee, P. N., *see* Khan, A. H.
Chaturvedi, M. D., 56
Chengapa, B. S., 214
Chesley, K. G., and Robertson, N. F., 101
Chester, K. S., 43
Cheyney, E. G., 154
Chhabra, B. S., 185
Chheda Lal, *see* Rehman, M. A.
Child, R., and Nathanael, W. R. N., 185
Chiocarello, P., *see* Spitzner, R.
Chodat, F., 10
Chollet, M-M., *see* Colin, H.
Chowdhury, K. A., 167
Christensen, C. M., *see* Hodson, A. C.
Chrystal, R. N., 260
Chulitskiĭ, N. N., 99
Cittadini, A., 176
Clapper, R. B., 135
— and Gravatt, G. F., 16
Clark, R. B., 17
Clark, T., 171
Clarke Jones, N., 104
Clear, T., 24, 228
Clements, A. B., *see* Scottish Machine Tool Corp., Ltd.
Clements, J. B., 113
Clepper, H., 121
Cline, McG., 108
Cockrell, R. A., 94
Coker, W. C., 16
Colin, H., Tanret, G., and Chollet, M-M., 141
Collet, H. M., 125
Collins, C., 248
Collins, C. W., *see* Walter, J. M.
Collins, M. R., *see* Grinsfelder, H.
Colvin, W. S., and Eisenmenger, W. S., 19
Comstock, J. A., and Henne, C., 84
Comte, F., 226
Connell, C. A., 255
Cook, D. B., 24
Cook, S. J., *see* Hull, C.
Cope, J. A., 52, 107, 159
Coppick, S., 27
— and Jahn, E. C., 28
Cordes, T. K., 110
Corey, A. J., and Moore, T. R., 105
Correia, D., 187
Costello, D. F., 125
Costello, J. W., 6
Coutts, J., 164
Cowlin, R. W., 71
— Briegleb, P. A., and Moravets, F. L., 136
Cox, H. A., 31, 165, 234
Cox, W. T., 235
Coxe, G. R., 126
Cozzens, F. R., 239
Craig, K. A., 102
Crane, H. L., *see* Shear, C. B.
Creighton, R. H. J., Gibbs, R. D., and Hibbert, H., 27
Crocker, R. L., 222
— *see* Stephens, C. G.
Croizat, L., 17, 18, 25, 83
Cromie, G. A., 184, 233
Cronquist, A., 16, 81, 227
Crosby, A. H., 53
Crosby, L. R., 119
Crouet, M. F., 242
Cruikshank, J. W., 71, 244
Cuatrecasas, J., 18
Cundy, P. F., 237
Curtis, C. C., and Bausor, S. C., 79
Curtis, J. D., 225
Cussac, C. M., *see* Imizcoz, E. C.
— *see* Lopez, E. D.

Dahlgren, B. E., 108
Dalgleish, T. W., 202
Dambach, C. A., 47, 205
Daniel, H., 81
Danielsson, K. E., *see* Säverborn, S.
Danilov, D. N., 11
Dannecker, K., 20
Das, B. M., 106
Datta, S., *see* Kapur, S. N.
Daubenmire, R. F., 12
Dauberschmidt, 194
Davidson, R. W., 225
— and Campbell, W. A., 192
Davis, D., 20, 152, 162
Davis, P. W., 156
Dawson, T. R., 40
Day, M. W., 219
— and Strong, F. C., 191
— and Vogel, F. H., 152
Day, W. R., 209–11
De, R. N., 157
Decker, J. P., *see* Kramer, P. J.
[De Gryse, J. J.], 118
Deichmüller, F., 179, 243
Del Canizo, J., *see* Martínez, J. B.
Delisle, R., 41, 109
Delmonte, J., 175
Delpeyron, J., 37
Demirtas, E., 199
Demmon, E. L., 213
Dengler, A., 255
— and Scamoni, A., 218
DenUyl, D., 51, 73
Desler, G. C., 187
Deters, M. E., 263
De Vall, W. B., 80
Devoto, F. E., and Rothkugel, M., 13
Diakova, and Melentieva, 105
Dieterich, V., 201
Dietz, A. G. H., 110
— and Grinsfelder, H., 31, 175, 243
— *see* Mehringer, F. J.
Dill, R. S., *see* Whittemore, H. L.
Dirks, C. O., 85
Djurberg, G., 197
Dodge, B. O., 193
Dolukhanov, A., 17
Doman, L. S., *see* Knight, R. A. G.
Dommen, M. E., 96
Donnelly, G. V., 34
Donny, J., 106
Donohoe, H. C., 196
Dorman, K. W., Schopmeyer, C. S., and Snow, A. G., 10
Dörr, R. E., 33
Dostál, R., 220
Douglass, A. E., 51
Dowdy, W. W., 78
Dowling, E. C., *see* Gill, T.
Downs, A. A., 166
— and McQuilkin, W. E., 229
— *see* Hepting, G. H.
Doyle, J., and Kane, A., 141
Dreibelbis, F. R., *see* Post, F. A.
Druce, J. G. F., 104
Drummond, R. O., 253
Ducke, A., 17, 153
Duckworth, J., 186
Duff, C. E., 171
Duffell, R., 176
Duffield, J. W., 143
Dufrénoy, J., *see* MacDougal, D. T.
Dugand, A., 14, 16, 18
Duguay, J., 186
Dundas, J., 189

Dunford, E. G., 216
— and Niederhof, C. H., 140
Dupont, G., 247
Dušanek, V., *see* Kubelka, V.
Dwyer, J. D., 226, 227
Dyachenko, A. E., 160
Dyer, R. A., 153

Eades, H. W., 29
Eastham, A. M., Fisher, H. E., Kulka, M., and Hibbert, H., 27
Edgerton, L. J., 141
Edlin, H. L., 92, 159, 223
Edmondson, C. H., 171
Edwards, C. P., and Nierenstein, M., 106
Egler, F. E., 77, 79
Eggeling, W. J., 224
Egler, F. E., 77
Eichmeyer, 109
Eide, E., 200
Eisenmenger, W. S., *see* Colvin, W. S.
Eklund, B., 11
Eldredge, I. F., *see* Winters, R. K.
Elliott, C., 15
Emden, F. I. van, 228
Emerson, A. E., and Miller, E. M., 154
Enders, C., and Hegendörfer, M., 27
Engler, A., *et al.*, 79
Englert, R. D., *see* Friedman, L.
Englerth, G. H., and Isaac, L. A., 114
English, P. F., *see* Bennett, L. J.
Erdtman, H., 28, 168
— and Rennerfelt, E., 169
Erickson, R. O., Brenner, L. G., and Wraight, J., 13
Erkin, G. D., 155
Eschenlohr, 162
Esterhuysen, E., *see* Adamson, R. S.
Etter, H., 78, 152
Ettlinger, L., 191
Evans, T. H., *see* MacGregor, W. S.
— *see* Mitchell, L.
Evenden, J. C., Bedard, W. D., and Struble, G. R., 195
Evenden, W., *see* Schuster, C. E.
Everingham, H., 235
Ewer, R. F., 196
Exell, A. W., 150, 153
Eyre, F. H., and LeBarron, R. K., 120
Ezell, A. L., *see* Friedman, L.
Ezri, H. A., *see* Paton, R. R.

Fairbairn, W. A., 5, 14
Fairhurst, L. G., 106
Faith, W. L., 180
Farmloe, C., 252
Farquhar, N. G., 39
Farron, P.-E., 97
Farský, O., *see* Kratochvíl, J.
Favre, E., 86, 156
Fawcett, H. S., 115
Fellows, E. S., *see* Prince, J. B.
Felt, E. P., 115, 192
— and Bromley, S. W., 117
Fennel, T. A., 108, 186
Fenska, R. R., 162
Ferrari, D., and Torresi, M., 37
Ferreira dos Santos, N., 7
Ferri, M. G., *see* Rawitscher, F. K.
Fieuzet, L., *see* Bleton, C. A.
Findlay, W. P. K., 102
— *see* Birkinshaw, J. H.
Firdaus, A. A., 23
Fisher, G. M., 231, 233
Fisher, H. E., Kulka, M., and Hibbert, H., 168
— *see* Eastham, A. M.
— *see* Kulka, M.
Fisher, R. C., 95, 239
Fitzpatrick, H. M., 263
Fitzwater, J. A., 241
Fivaz, A. E., 125
Flatscher, H., 236
Flenner, A. L., Kaufert, F. H., and Salzberg, P. L., 103
Floderus, B., 16
Fobes, C. B., 112
Foggie, A., 265
Folweiler, A. D., and Vaux, H. J., 269
Forbes, A. C., 5, 150
— *see* Smith, J. H.
Forman, L. V., 101
Fors, A. J., 81
Forsaith, C. C., 69
Forssman, V. H., 99
Fosberg, F. R., and Walker, E. H., 13
Foster, E. L. P., 236
Foster, J. E., *see* Biswell, H. H.
Fowler, M. E., 39, 250
— and Stevenson, J. A., 257
Fox, W., 162
Francis, S. H., 196
Francis, W. D., 110, 186, 253
Francke, A., 85
Franklin, G. L., 234
Freeland, R. O., 75
French, M. H., 39
Freudweiler, R., 74
Frey-Wyssling, A., 26
Frezzi, M. J., 193
Friedman, L., Ezell, A. L., and Englert, R. D., 42
Friend, J. E., 30
Fries, N., 8
Fritz, E., 70, 187
Fröhlich, J., 191
Fuller, F. B., and Oberg, T. T., 27
Furness, T., 116

Gäbler, H., 116, 260
Galbraith, A. V., 57, 86, 203
Galindo, A. R., 108, 109
Gallay, W., and Graham, G. G., 31
Gams, H., 213
Gardner, C. A., 221
Gardner, J. A. F., and Hibbert, H., 168
Gardner, J. C. M., 113, 117, 245
Gardner, V. R., 112
Garner, R. J., 9
Garratt, G. A., 174
Gautier, M., 72
Gavrilov, K. I., 75
Gaztambide, J. B., 122
Geddes, A., 268
Gee, G., *see* Tristram, G. R.
Geete, E., 202, 205, 225, 233
Gentry, H. S., 13
Gerland, H., 244
German, H. V., *see* Lang, A. A. D.
Gerry, E., 29
— *see* Luxford, R. F.
Gese, E. C., *see* Shadle, A. R.
Gevorkiantz, S. R., 200
— and Scholz, H. F., 266
Gewerkschaft Keramchemie-Berggarten, 177
Ghosh, A. K., 213
Giannotti, O., *see* Lepage, H. S.
Gibbs, R. D., *see* Creighton, R. H. J.
Gieseking, E., 103
Gill, T., and Dowling, E. C., 69
Gilly, C. L., 153
Gindel, J., 160, 198
Givaudon, 105
Gläser, H., 31
Glasgow, R. D., and Blair, R., 115
Glasscock, H. H., *see* Pizer, N. H.
Gobeil, A. R., 117
Godwin, G., 171, 172
Godwin, H., 5, 70
Goetz, 216
Goff, W. E., 38
Gooding, E. G. B., 137
Goodyear, H. E., 218
Gorrie, R. M., 73
Gouwentak, C. A., 9
Grafton, C. M., 242
Grah, R. F., and Wilson, C. C., 268
Graham, G. G., *see* Gallay, W.
Graham, P. H., 176
Graham, R. M., 203
Graham, S. A., 19
Granger, C. M., 204
Grassmann, W., *see* Kuntara, W.
Gravatt, G. F., *see* Clapper, R. B.
Graves, H. S., 212
Graves, J. B., 50
Gray, H. R., 262
Gray, W. E., 31
Greene, H., and Jewitt, T. N., 105
Greene, H. C., 15
Greenhalgh, R., 42
Gregson, F., 273
Grewe, F., 82
Grierson, R., 99
Gries, G. A., 46
Griffith, A. L., 52, 88, 90, 108, 157, 163
— and Ram, B. S., 119
Griffith, R. B., and Jeffrey, R. N., 217
Grindley, D. N., *see* Henry, A. J.
Grinsfelder, H., and Collins, M. R., 31
— *see* Dietz, A. G. H.
see Klein, L.
see Perry, T. D.
Grøn, A. H., 90
Grondal, B. L., 30
Grossius, T., 103
Grössler, W., 26
Grottian, W., 125
Gruenhagen, R. H., 46
Grünwoldt, F., 69
Guenther, E., 185
Guillebaud, W. H., 24, 162
Guinier, *see* Berget
Gullöve, F. H., 218
Gunton, H. C., 4
Gupta, R. S., 72
Gur, A., 92
Gusev, P. P., *see* Nechaev, V. K.
Gustafson, F. G., 11
Gustafson, R. O., 50

Hagbergh, E., 197

Hajny, G. J., *see* Leonard, R. H.
— *see* Harris, E. E.
Hale, J. D., 240
Hall, R. C., 263
Haller, H. L. J., *see* La Forge, F. B.
Halls, E. E., 175
Halpern, D. B., 33
Hanrhan, F. J., 31
Hansbrough, J. R., Waterman, A. M., and Luxford, R. F., 171
— *see* Spaulding, P.
Hansen, H. J., 187, 254
Hansen, H. P., 6, 213
Hardy, G. A., 49
Harkom, J. F., 105, 243
Harlow, W. M., 242
Harper, F. B., and Bonney, M. C., 265
Harper, R. M., 15
Harris, E. E., Beglinger, E., Hajny, G. J., and Sherrard, E. C., 181
— *see* Saeman, J. F.
— *see* Sherrard, E. C.
Harris, P., *see* Stevens, W. C.
Harris, T. M., 136
Harrison, J. D. B., 119
Harrison, J. L., 188
Harrison, J. W. H., 49
Harrow, K. M., 116
Hart, C. E., 270
Härtel, O., 73
Hartelius, H., 196, 243
Hartig, R. D., 247
Hartley, C., and May, C., 169
— and Scheffer, T. C., 169
Hartmann, F., 138
Hasche, R. L., 182
Haslund, O., 94
Hass, M., 201
Hasselstrom, T., 110
Hastings, R., 110
Hatfield, I., 103
Hatt, R. T., 154
Hausam, W., and Kuntara, W., 239
Hausrath, H., 155
Hawes, E. T., and Tracy, L., 172
Hawley, R. C., and Lutz, H. J., 20
Haycock, A. H., 32, 100, 176, 244
Hayes, G. L., 256
Hebb, H. C., *see* Recknagel, A. B.
Hedemann-Gade, E., 24
Hegendörfer, M., *see* Enders, C.
Heger, A., 200
Heiden, H., 236
Heikinheimo, O., 164
Heinrich, F., 137, 139, 140, 216
Heller, O., 180
Hellström, N., *see* Stenberg, O.
Helphenstine, R. K., 35
Henderson, F. Y., 170
Hendricks, B. A., and Johnson, J. M., 190
Henne, C., *see* Comstock, J. A.
Henning, F. W., and Aun, H., 193
Henry, A. J., and Grindley, D. N., 108
Henry, B. W., 192
— Moses, C. S., Richards, C. A., and Riker, A. J., 192
Hepting, G. H., 95, 257
— and Downs, A. A., 44
Herbert, P. A., 203
— *see* Holcomb, C.
Herrarte, M. P., 185
Herrick, A. M., 263
Herriot, R. I., *see* Smith, R.
Herzig, J., 178
Hess, E., 118, 123, 136
Hess, R. W., 58, 106
Heyward, F. J., 231
Hibbert, H., *see* Creighton, R. H. J.
— *see* Eastham, A. M.
— *see* Fisher, H. E.
— *see* Gardner, J. A. F.
— *see* Kulka, M.
— *see* MacGregor, W. S.
— *see* Mitchell, L.
Hiley, W. E., 201
Hilf, H. H., 121
Hill, C. L., *see* Weeks, D.
Hill, E. H., 101
Hinckley, L. C., 224
Hine, W. R., 52
Hirt, R. R., 44, 114
Hiscocks, R. D., 98
Hjorth, R., 189
Hoagland, D. R., 141
Hodge, R. E., 36
Hodge, W. H., 39
Hodson, A. C., and Christensen, C. M., 48
Hoffmann, E., 103
Hofmann, A., 80
Hoheisel, A., 173
Holcomb, C., and Herbert, P. A., 57, 58
Holman, H. L., 137
Holst, G., *see* Brauns, O.
Hopkins, G. M., 205
Hopkins, H., 272
Hopp, H., *see* Scheffer, T. C.
Hopping, G. R., Leech, H. B., and Morgan, C. V. G., 48
Horsfall, J. G., *see* Zentmyer, G. A.
Horton, J. S., and Wright, J. T., 154
Hosaka, E. Y., *see* Ripperton, J. C.
Hough, A. F., *see* Ostrom, C. E.
Howard, A. L., 16, 17, 25, 80, 81, 151, 152, 225, 227
Howard, F. L., and Caroselli, N. E. 192
Howard, Sir H., 266, 267
Howard, P. A., *see* Hull, C.
Howe, H., 13
Howells, T. A., and Lewis, H. F., 175
Howie, E. L., 189
Höye, J., *see* Schmidt-Nielson, S.
Huber, R., 103
Huberman, M. A., 155
Hui-Lin Li, 82, 152, 224
Hull, C., Paddock, M., Cook, S. J., and Howard, P. A., 4
Hull, P. B., 177
Hülscher, J., 108
Hundevad, J., 42
Hunn, J. V., 106
Hunt, G. M., 98
— and Snyder, T. E., 35
Husemann, E., 28
Hustich, I., 149

Ihlenfeldt, 32
Imizcoz, E. C., and Cussac, C. M., 231
Imperial Chemical Industries, Ltd., *see* Ainley, A. D.
Ingold, C. T., 80
Irish, C. F., *see* Swingle, R. U.
Isaac, L. A., *see* Englerth, G. H.
Isanogle, I. T., 219
Ishaq, S. M., *see* Rehman, M. A.
Ivashchenko, A. I., 141

Jackson, W. L., 106
Jahn, E. C., 101, 244
— *see* Coppick, S.
Jalava, M., 95
James, E. M., *see* Wokes, F.
Jamieson, G. S., and Rose, W. G., 40
— *see* Rose, W. G.
Jamwal, H. S., 91
Janett, A., 56
Jarkovaja, L. M., 75
Jauch, C., 259
Jay, B. A., *see* Boulton, E. H. B.
Jayaweera, D. M. A., 250
Jayme, G., 244, 245
Jeffrey, G. A., *see* Tristram, G. R.
Jeffrey, R. N., *see* Griffith, R. B.
Jemison, G. M., 112
— and Korstian, C. F., 230
Jenkins, A. E., 258
Jensen, H., 218
Jensen, H. W., 76
Jenssen, S., 44
Jervis, A. E. L., 31
Jewitt, T. N., *see* Greene, H.
Johansen, F. C., and Loach, J. C., 106
Johanson, Å., 152
Johnson, A., 106
Johnson, A. C., *see* Latta, R.
Johnson, H. M., 29
Johnson, J. M., *see* Hendricks, B. A.
Johnson, L. P. V., 8, 41
Johnson, S. L., 121
Johnson, T., *see* Brauns, O.
Johnsson, H., *see* Nilssen, T.
Johnston, E. J., *see* Herriot, R. I.
Johnston, H. R., 49
Johnston, I. M., 224
Johnston, J. P., *see* Liming, F. G.
Jones, D., 125
Jones, G. N., 15
Jones, J. R. I. L., 49
Jones, N. C., 36
Josephson, H. R., *see* Weeks, D.
Joshi, A. C., 220
Joshi, K. D., 82
Jungkunz, R., *see* Pritzker, J.
Jungo, 162

Kahn, S. H., 182
Kalbermatten, J. de, 74
Kane, A., *see* Doyle, J.
Kapur, S. N., and Datta, S., 242
Karnik, M. G., *see* Ahmad, N.
Karpman, M. J., *see* Nechaev, V. K.
Kaufert, F. H., and Richard, C. A., 175
— *see* Flenner, A. L.
Kaufmann, R. R. U., 228
Kaul, D. N., 87
Kausik, S. B., 78, 151
Kaven, G., 239
Kayacik, H., 90
Kaylor, J. F., 123
Kelly, A. P., 72, 82
Kenealy, J. C., 256
Kennedy, H., 203
Kermode, C. W. D., 89, 156, 158, 164
Kerr, A. S., 123
Ketchum, M. S., 111

Kevan, D. K., 228
Keyser, P. V., and Spelshouse, W. E., 32
Khan, A. H., 110
— and Chatterjee, P. N., 259
Kienitz, E., 121
Kierulf, T., 200
Kimmey, J. W., and Mielke, J. L., 256
King, N. L., 206
Kingston, R. S. T., 168
Kinney, J. P., 55
Kirkland, B. P., *see* Reynolds, R. R.
Kirkpatrick, T. W., 239
Kirkwald, E., 217
Kissin, I., 270
Kitchingman, G. D., 140, 155
Kittredge, J., 220
Klapproth, H., 98
Klauditz, W., 33
Klein, L., Grinsfelder, H., and Bailey, S. D., 100
Kline, A., *see* Saeman, J. F.
Kline, G. M., 33
Kloot, N. H., 254
Knight, P., 118
Knight, R. A. G., and Doman, L. S., 175
Knowles, E. C., and McCoy, F. C., 175
Knuchel, H., 72, 97
Koberidze, A., 8
Kobezski, I. D., 140
Koch, W., 221
Koerner, L. J., 120
Kolb, H., *see* Kummerer, L.
Kolesnikov, B. P., *see* Balandin, D. A.
Kollmann, F., 93, 236
— and Antonoff, M., 25
Koppel, G. van de, 252
Kordes, H., 142
Koroleff, A., 157, 206, 241
— Walker, J. F., and Stevens, D. R., 30
Korstian, C. F., *see* Jemison, G. M.
Kortschinski, I. L., 27
Kosljar, K., 206
Kosmachevsky, A. S., 227
Köstler, J., 70
Krahl-Urban, J., 255
— Liese, J., and Schwerdtfeger, F., 188
Kramer, P. J., and Decker, J. P., 75
Krasinski, N. P., 41
Kratochvíl, J., and Farský, O., 49
Krebs, E., 254
Krenn, K., 197
Kressman, F. W., *see* Sherrard, E. C.
Kriel, H. T., 75
Krishnaswami, K., 157, 163
— Venkato Rao, K. A., and Venkataramaiyer, N., 183
Krogh, P. M. D., *see* Loseby, P. J. A.
Kruedener, A. von, 137
Krupenikov, I. A., 19, 155
Krzwoblocki, Z., 167
Kubelka, V., Masner, L., Mícek, K., and Dušanek, V., 39
Kubiëna, W., 138
Kucheryabÿkh, E. G., 21
Kulka, M., Fisher, H. E., Baker, S. B., and Hibbert, H., 27
— *see* Eastham, A. M.
— *see* Fisher, H. E.
Kummerer, L., and Kolb, H., 36
Künanz, H., 136
Kuntara, W., and Grassmann, W., 184
— *see* Hausam, W.
Kurien, P. J., 40
Kurir, A., 194
Kurth, E. F., *see* Lewis, H. F.
— *see* Buchanan, M. A.
Kusmin, M. K., 95
Kutateladze, Sh., 17

LACHMUND, H. G., *see* Scheffer, T. C.
La Forge, F. B., and Haller, H. L. J., 117
Lafortune, J. G., 173
Lähde, A., 54
Lahey, R. W., 241
Laing, E. V., 225
Lamb, T. R., 185
Lambert, J. H., 269
Lambiotte, A., 367
Lane Poole, C. E., 230
Lang, A. A. D., and German, H. V., 175
Lange, W. H., 118, 196
Langlet, O., 21, 142
Large, J. R., 193
Larochelle, A., 204
Larson, G. C., 75
Larssen, B. H., 32
Lassmark, J. V., 175
Latta, R., and Johnson, A. C., 112
Laurie, M. V., 72, 73, 87, 88, 89, 90, 92, 119, 147, 155, 156, 157, 163, 183, 198, 199
Leach, C. W., *see* Peck, R. H.
Leary, C. S., 268
LeBarron, R. K., 158
— *see* Amidon, G. B.
— *see* Eyre, R. H.
LeClair, W. J., 58, 267
Leech, H. B., 29
— *see* Hopping, G. R.
Lees, P. M., 39
Lefkof, E. A., 103
Lehmann, E., 28
— and Wilke, G., 148
Leibundgut, H., 88, 124
Leighton Hare, C., 148
Lemesle, R., 217
Lemos Froes, R. de, 83
Lenz, L. W., 5
Léon, [Frère], *see* Marie-Victorin, [Frère]
Leonard, R. H., and Hajny, G. J., 182
Leontiev, N. L., 27
Leontiev, V., 23
Lepage, H. S., and Giannotti, O., 49
LeRoux, R. J., 41
Leschner, F., 272
Letkovskiy, A. I., 138
Leutritz, J., 34
Lever, R. J. A. W., 262
Levie, C. G., 241
Levin, V. I., 199
Levon, M., 235
Lewis, C. B., and Swabey, C., 96
Lewis, D., 75
Lewis, H. F., 176
— Brauns, F. E., Buchanan, M. A., and Kurth, E. F., 237
— *see* Brauns, F. E.
— *see* Brookbank, E. B.
— *see* Buchanan, M. A.
— *see* Howells, T. A.
Lewis-Johnsson, M., 266
Liese, J., and Seifert, L., 178
— *see* Krahl-Urban, J.
Limaye, V. D., 235, 248, 249
Liming, F. G., and Johnston, J. P., 20
Lindberg, R. C., 30
Linder, D. H., 15
— *see* Barghoorn, E. S.
Lindquist, B., 147
— and Malmberg, E., 143
— and Nenzell, G., 22
Lisin, S. S., 231
Lissyzin, D. I., and Samsel, N. V., 109
Little, E. L., 17, 83, 261
Littlefield, E. W., 88
Lloyd, A. H., 171
Loach, J. C., *see* Johansen, F. C.
Lockyard, C. R., 164
Loeb, A. A., 97
Long, J. D., 175
Loo, S. W., and Wang, F. H., 10
Loomis, W. E., *see* McComb, A. L.
Loon, J. van, *see* Steger, A.
Lopes Pimentel, A. A., 46
Lopez, E. D., and Cussac, C. M., 23
Lorenz, R. C., 29
Loseby, P. J. A., and Krogh, P. M. D., 177
Lotskar, H., and Maclay, W. D., 108
Loughborough, W. K., 244
Lourteig, A., and O'Donnell, C. A., 153
— *see* O'Donnel, C. A.
Loveridge, E. W., 189
Lowdermilk, W. C., 7
— and Wickes, D. R., 74, 140
Lowe, J. L., 80
Lowsley, L., 33
Lubicz, L., *see* Paterson, A.
Lubyako, M. N., 144
Lüdeke, M., 237
Lumsden, G. Q., 248
Luncz, G., 90, 123
Lundberg, H. A., 27
Lussier, O., 268
Luttringhaus, H., 177
Lutz, H. J., 198
— *see* Hawley, R. C.
Luxford, R. F., Wood, L. N., and Gerry, E., 29
— *see* Hansbrough, J. R.
— *see* Whittemore, H. L.
Luze, J.-J. de, 88

MACALONEY, H. J., 43, 195
McArd, G. W., 187
MacBride, J. F., 17
McClure, F. A., 227
McComb, A. L., and Loomis, W. E., 14
McCool, G., 22
McCoy, F. C., *see* Knowles, E. C.
McCulloch, W. F., 96, 97, 123, 189
McCullough, C. B., 189
Macdonald, J., 269
Macdonald, K. R., 190
MacDougal, D. T., 24
— and Dufrénoy, J., 215
McEvoy, T., 20, 21, 213
MacGillivray, J. C., 57
McGovern, J. N., and McGregor, G. H., 34, 101
— *see* Simmonds, F. A.

McGregor, G. H., *see* McGovern, J. N.
MacGregor, W. S., Evans, T. H., and Hibbert, H., 27
McGuffin, W. C., 18, 84
McInteer, B. B., 221, 233
McIntyre, H. L., *see* Schaffner, J. V.
McIntyre, R. B., 38
Mackaness, F. P., 80
Mackarness, C. G. M., 163
Mackay, J. H., 270
MacKay, M. R., *see* Brown, A. W. A.
McKee, R. H., 102
McKenzie, H. L., 116
MacKinney, H. W., and Repsher, L., 32
Mackintosh, C., 42
Maclay, W. D., *see* Lotskar, H.
McLean, D. M., 193
MacMillan, H. R., 264
McQuilkin, W. E., *see* Downs, A. A.
Madel, W., 29
Maes, E. E., 141
Magan, A. T. S., 269
Mahendru, I. D., 109
Maitland, V. K., 202
Maksimov, N. A., *see* Turetskaya, R. Kh.
Mallner, F., 224
Malmberg, E., *see* Lindquist, B.
Malmborg, G. E., 90
Manifold Developments, Ltd., *see* Paterson, A.
Manjunath, B. L., and Nagaraj, B. S., 40
Mann, J. W., *see* Russell, G. F.
Manning, F. A. E., 206
Mantel, W., 121
Marie-Victorin, [Frère], and Léon, [Frère], 224
Marinović, M., 54
Mark, H., 176
Markwardt, L. J., 236
Marrero, J., 110
Marrit, I. C., 52
Martin, A., 173
Martin, A. F., *see* Spurlin, H. M.
Martin, G., 40
Martin, J. F., 114
Martin, J. S., 33
Martin, O. M., 204
Martínez, J. B., 114
— and Del Canizo, J., 258
Martínez, J. G., 71
Martorell-Davila, L. F., 116
Masner, L., *see* Kubelka, V.
Mason, C. F., 108
Mattison, C. W., 125
Mattoon, H. G., 56
May, C., *see* Hartley, C.
— *see* Rex, E. G.
— *see* Walter, J. M.
Mayer-Wegelin, H., 162
Meade, O. L., 44
Mehringer, F. J., Carr, J. H., and Dietz, A. G. H., 254
Melentieva, *see* Diakova
Melville, R., 252
— *see* Wokes, F.
Menard, E., 122
Menger, A., and Bock, E., 32
Menon, K. N., *see* Sukumaran Kartha, A. R.
Merh, J. L., *see* Padwick, G. W.
Merrill, E. D., and Perry, L. M., 83
Messer, H., 89
Metcalf, F. P., 149
Metcalfe, C. R., 148
Metz, L., 104
Meyer, H. A., 51, 55, 119, 123
— and Stevenson, D. D., 51
Meyer, W. H., 50
Mícek, K., *see* Kubelka, V.
Michailoff, I., 197
Michels, P., 26
Miele, C., 226
Mielke, J. L., 44
— *see* Kimmey, J. W.
Milanez, F. R., 167
Miles, N. P., 250
Miller, D. B., *see* Miller, E. M.
Miller, E. M., and Miller, D. B., 154
— *see* Emerson, A. E.
Miller, H. P., 121
Millington, A. J., 40
Mills, H. B., 195
Mimeur, J. M., 118
Minckler, L. S., 161
Minz, G., 258
Miranda Bastos, A. de, 153
Miron, K. F., 158
Mirov, N. T., 9, 160
Mitchell, J. E. M., 94
Mitchell, L., Evans, T. H., and Hibbert, H., 168
— and Hibbert, H., 168
Mitchell, S., 112
Mobbs, E. C., 87
Mohammedu Adelodun, 182
Mohan, N. P., 86, 87, 112, 164
Mohendru, I. D., 186
Moinat, A. D., 198
Moldenhawer, K., 255
Monachino, J., 18
Monrós, F., 19, 85
Montero, J. G., 180
Mook, P. V., and Verrall, A. F., 178
Moore, D., *see* Watson, C. J. J.
Moore, E. B., 265
Moore, T. R., *see* Corey, A. J.
Moravets, F. L., 136
— *see* Cowlin, R. W.
Morelli, D. A., 167
Morgan, C. V. G., *see* Hopping, G. R.
Morrison, B. Y., 184
Morrison, C. F., 111
Morrison, F. R., *see* Penfold, A. R.
Morse, W. L., 38
Moseley, M. F., 15
Moses, C. S., *see* Henry, B. W.
Moskovits, I., 100
Moss, E. H., 79
Mottet, A. L., 104
Moulds, F. R., *see* Youl, J. W.
Mucke, K., *see* Wienhaus, H.
Mujica, R. F., 115
Mulholland, F. D., 205
Müller, B., 247
Müller, H., 49
Müller, P. H., *see* Ruzicka, L.
Müller, R., 74
Mulloy, G. A., 30, 266
— *see* Robertson, W. M.
Mumenthaler, E., 118
Munro, J. W., 194
Muntz, H. H., 23
— *see* Bull, H.
Murrill, W. A., 259
Murthi, S., 87
Muthanna, M. A., 87

NACHTIGALL, 229
Nagaraj, B. S., *see* Manjunath, B. L.
Nägeli, W., 92, 116
Naik, P. M., 72
Nair, K. N. R., 149
Narayanamurti, D., 243
— and Pande, J. N., 238
— Ranganathan, V., and Roy, D. C., 99
— and Singh, K., 175
Nash, R. W., 260
Nash, T. A. M., 84
Nast, C. G., 219
— *see* Bailey, I. W.
Nath, J. C., 157
Nathanael, W. R. N., *see* Child, R.
Naumann, B., 201
Nauth, A. M., *see* Shadle, A. R.
Navarro de Andrade, E., 17
Neal, A. C., 273
Neale, J. A., 96
Nebesar, R. J., 32
Nechaev, V. K., Taranovich, N. M., Shamkhevich, D., Karpman, M. J., and Gusev, P. P., 250
Neilson-Jones, W., 139
— *see* Rayner, M. C.
Němec, A., 43
Nemeth, F. F., 50
Nenzell, G., *see* Lindquist, B.
Nepveu, P., 196
Nestler, R. B., and Bailey, W. W., 251
Nevrell, T. H., *see* Brauns, O.
Newman, C. A., 253
Newman, D., *see* Urquhart, B. P.
Nicholls, R. V. V., 168
Nichols, W. H., 32
Nicholson, J. W., 73
Nicol, H., 115
Niederhof, C. H., *see* Dunford, E. G.
Nierenstein, M., *see* Edwards, C. P.
Nikitin, I. N., 142
Nilsson, T., 145
— and Johnsson, H., 240
Nonken, G. C., 99
Nordquist, M., 31
Nowack, A., 246

OBERG, T. T., *see* Fuller, F. B.
Oberli, H., 89
O'Donnell, C. A., and Lourteig, A., 17
— *see* Lourteig, A.
Offermanns, F., 101
Ogievskiĭ, V. M., 178
Olerinskiy, V. Ya., 160
Oliphant, J. N., 58
Olive, L. S., 15
Olofsson, N. M., 20
Olsen, C., 215
Olson, R. V., 90
O'Mahony, E., 29
Oosting, H. J., 12
— and Reed, J. F., 221
— *see* Williams, R. M.
Orell, B. L., 113
Organ, J. G., *see* Wokes, F.
Orlova, I. M., 74
O'Rourke, F. L., *see* Stoutemyer, V. T.

Ossowski, L. L., 47
Ostrom, C. E., and Hough, A. F., 23
Ostrowski, H. J., 33
Otten, E., 48
Owden, J. S., 73
Ozenda, P., 220

PACKMAN, D. F., *see* Campbell, W. G.
Paddock, E. F., 143
Paddock, M., *see* Hull, C.
Padwick, G. W., and Merh, J. L., 258
Pajari, K., 185
Pallmann, H., and Richard, F., 124
Palmer, E. J., 151
Pande, J. N., *see* Narayanamurti, D.
Pannell, E., 5
— *see* Andrews, H. N.
Pantulu, J. V., 76
Parker, H. A., 198
Parker, L. H., 55
Parker, R. N., 87, 88, 155
Parodi, L. R., 13
Parsons, T. H., 161
Patel, C. B., 107
Paterson, A., Lubicz, L., and Manifold Developments, Ltd., 245
Paton, R. R., 87, 88, 230
— Secrest, E., and Ezri, H. A., 86
Patterson, A. E., and Weddell, D. J., 199
Peace, T. R., 258
Pearce, J. K., 120
Pearson, G. A., 19, 124, 201, 264
Peck, R. H., Sechrist, W. C., and Leach, C. W., 58
Pedro, J. G., 11
Peirson, H. B., 194
Pemberton, C. E., 95
Penfold, A. R., and Morrison, F. R., 251
Penfound, W. T., *see* Bonck, J.
Penistan, M. J., 152
Penn, W. S., 168
Penschuck, 155
Pera, J. D., *see* Buckman, S. J.
Perbohner, S., 175
Perelygin, L. M., 27
Perlman, D., 248
Perrig, K. A., 190
Perrot, *see* Berget
Perry, B. A., 143
Perry, E. L., 109
Perry, H. W., 99
Perry, L. M., *see* Merrill, E. D.
Perry, T. D., and Grinsfelder, H., 99
Pessin, L. J., 23
— and Chapman, R. A., 9
Peterson, W. H., 182
Petitmermet, M., 70, 123
Petrie, S. M., 24
Petrini, S., 163
Petrov, A. P., 4
Petterson, H., 147
Pettifor, C. B., 167
Pfanner, J., 103
Pfeiffer, N. E., 218
Phadke, A. B., 163
Phelan, V. B., *see* Whittemore, H. L.
Phelps, V. H., 46
Phillips, E. P., *see* Adamson, R. S.
Pickford, G. D., *see* Reid, E. H.
Piper, C. S., 6
Pizer, N. H., and Glasscock, H. H., 80
Pladikas, A. G., 45
Plow, R. H., Saeman, J. F., Turner, H. D., and Sherrard, E. C., 181
Plumley, L. P., 263
Plymale, E. L., and Wylie, R. B., 11
Podgornykh, A., *see* Buevskiĭ, A.
Poetter, N., 100
Pomerleau, R., 43, 254
Pontis Videla, R. E., 192
Pospišil, R., 121
Post, F. A., and Dreibelbis, F. R., 7
Potzger, J. E., and Tharp, B. C., 213
Powers, D. H., 175
Prasad, J., 16, 86
Pratt, G. H., *see* Stevens, W. C.
Prebble, M. L., 85, 194
Prescott, J. A., 216
Preston, J. F., 124, 265, 271
Priehäusser, G., 191
Priest, C. S., 184
Prince, J. B., and Fellows, E. S., 33
Pring, N. G., 205
Pritzker, J., and Jungkunz, R., 184
Proshkin, G. N., *see* Bensman, S. A.
Pryor, L. D., and Shoobridge, D. W., 256
Pvatnitskiy, S. S., 152

QUÉTEL, R., 141
Quick, C. R., 223

RABATÉ, J., *see* Charaux, C.
Rabin, J., 28, 106
Racine, E., and Richard, R., 213
Rainey, J. L., *see* Bruson, H. A.
Raizada, M. B., 85, 226
Ram, B. S., *see* Griffith, A. L.
Ramsbottom, J., 80
Ranganathan, V., and Roy, D. C., 99
— *see* Narayanamurti, D.
Rangaswami, S., 94
Rangel, J. L., 185
Rawitscher, F. K., 12
— and Ferri, M. G., 8
Rayner, M. C., 139
— and Neilson-Jones, W., 138
Raynor, E. W., 87, 112, 164
Read, J., 63–68
Recknagel, A. B., 91
— and Hebb, H. C., 265
Record, S. J., 25, 93, 149, 167, 235
Reece, P. O., 42
Reed, J. F., *see* Oosting, H. J.
Refsnes, E., *see* Schmidt-Nielsen, S.
Rehman, M. A., 180, 183, 242
— and Chheda Lal, 182
— and Ishaq, S. M., 179
Reid, E. H., and Pickford, G. D., 184
Remezov, N. P., and Smaragdov, D. G., 25
Rendle, B. J., 167, 212
Rennerfelt, E., 169, 224
— *see* Erdtman, H.
Repsher, L., *see* MacKinney, H. W.
Reusch, A., *see* Schwarz, L.
Reveal, J. L., 81
Rex, E. G., and May, C., 115
Rey, E., *see* Ruzicka, L.
Reynolds, R. R., 53, 266
— Bond, W. E., and Kirkland, B. P., 200
Rhoads, A. S., 259
Rhys, J. P., 204
Ribers, U., 173
Richard, C. A., *see* Kaufert, F. H.
Richard, F., *see* Pallmann, H.
Richard, R., *see* Racine, E.
Richards, A. V., 218
Richards, C. A., *see* Henry, B. W.
Richardson, H. L., 55
Richart, F. E., and Williams, C. B., 42, 254
Richell, C. A., 273
Rickett, H. W., 78, 226
Riggal, E. C., 19
Riker, A. J., *see* Henry, B. W.
Rikli, M., 1–3
Ripperton, J. C., and Hosaka, E. Y., 150
Ritchie, J., 174
Rivera, V., 257
Roberts, H., 32
Roberts, H. D., 236
Robertson, J. M., *see* Yorgiadis, A. J.
Robertson, N. F., *see* Chesley, K. G.
Robertson, W. A., 34, 38, 57
Robertson, W. M., 53
— and Mulloy, G. A., 263
Rocha Azevedo, P. da, 103
Roeser, J., *see* Stuart, E.
Rogers, N. S., 55, 204
Rogers, R. W., 124
Rohmeder, E., 22, 152
Rolland, M., 248
Rose, W. G., and Jamieson, G. S., 40
— *see* Jamieson, G. S.
Rosendahl, R. O., 7
Rosenfeld, W., 262
Rosenkrans, D. B., 160
Rosten, M. M., *see* Sankey, C. A.
Rostler, G., 32
Roth, C., 86
Rothkugel, M., *see* Devoto, F. E.
Rothmaler, W., 14
Rousseau, L. Z., 79
Rovesti, G., 217
Roy, D. C., *see* Narayanamurti, D.
— *see* Ranganathan, V.
Roy, G., 137
Roy, T. C., 46
Rubner, K., 143, 155
Rudolph, B. A., 50
Runkel, R., 166
Runyan, C. R., 50
Rupf, H., 172
Russell, A., 250
Russell, G. F., 247
— and Mann, J. W., 246
Russell, P. G., 150
Rust, S. F., 243
Ruzicka, L., Boer, A. G., and Rey, E., 104
— Schinz, H., and Müller, P. H., 217
Ryan, V. A., 39
Rycroft, H. B., 137

SABHARWAL, L. R., 156
Sachtleben, H., 48
Saeman, J. F., 181
— Bubl, J. L., and Harris, E. E., 181
— Harris, E. E., and Kline, A., 181
— *see* Plow, R. H.

Sagreiya, K. P., 88, 112, 156, 161, 164, 183
Salzberg, P. L., *see* Flenner, A. L.
Samsel, N. V., *see* Lissyzin, D. I.
Sampson, A. W., 189
Sandermann, W., 185
Sankey, C. A., and Rosten, M. M., 110
Sant Ram, B., 94, 135, 163, 197, 199
Sarasola, A. A., 259
Sarten, P., *see* Schütz, F.
Sastry, S. G., 251
Säverborn, S., and Danielsson, K. E., 217
Scamoni, A., *see* Dengler, A.
Scarth, G. W., 188
Schaede, R., 215, 216
Schaffner, J. V., and McIntyre, H. L., 116
Schantz-Hansen, T., 173
Schaphorst, W. F., 167
Schard, L., 172
Schedl, K. E., 261
Scheffer, T. C., Lachmund, H. G., and Hopp, H., 238
Scheffer, T. C., *see* Hartley, C.
Schery, R. W., *see* Woodson, R. E.
Schiffino, J., 235
Schimaneck, E., 105
Schimitschek, E., 135, 195
Schinz, H., *see* Ruzicka, L.
Schmidt, H., 154
Schmidt-Nielsen, S., and Höye, J., 236, 237
— and Refsnes, E., 237
Schmitt, J. B., 170
Schmuziger, H., 136, 233
Schnabel, P., 4, 157
Schnetzler, K., *see* Bender, F.
Scholz, H. F., *see* Gevorkiantz, S. R.
Schönenberger, E., 124
Schopmeyer, C. S., *see* Dorman, K. W.
Schrader, O. H., 27, 175
Schubert, J., 140
Schulman, E., 51, 198
Schulz, A. G., 153
Schulze, B., 238
Schuster, C. E., Stephenson, R. E., and Evenden, W., 73
Schütz, F., and Sarten, P., 168
Schwartz, H., 244
Schwarz, L., and Reusch, A., 178
Schwerdtfeger, F., 188, 194
— *see* Krahl-Urban, J.
Scott, H., 154
Scottish Machine Tool Corp., Ltd., and Clements, A. B., 41
Seborg, C. O., *see* Simmonds, F. A.
Sechrist, W. C., *see* Peck, R. H.
Secrest, E., *see* Paton, R. R.
Secrest, H. C., 195
Seifert, L., *see* Liese, J.
Seigworth, K. J., 53
Seiler, J. F., 41
Sen Gupta, J. N., 83, 86, 122, 147
Sen Gupta, R., *see* Gupta, R. S.
Seybold, A., 220
Shadle, A. R., Nauth, A. M., Gese, E. C., and Austin, T. S., 194
Shamkhevich, D., *see* Nechaev, V. K.
Sharkov, V. I., 105
Sharma, Y. M. L., 16
Sharp, F. L., *see* Ainley, A. D.
Shaw, E. C., 240
Shead, A. C., 38
Sheals, R. A., *see* Brown, R. C.
Shear, C. B., and Crane, H. L., 22
Sherrard, E. C., and Harris, E. E., 102
— and Kressman, F. W., 180
— *see* Harris, E. E.
— *see* Plow, R. H.
Shipley, G. B., 103
Shoobridge, D. W., *see* Pryor, L. D.
Shope, P. F., 45
Shukla, V. B., 213
Siggers, P. V., 191
Simmonds, F. A., McGovern, J. N., and Seborg, C. O., 245
Simmons, F. C., 30, 50
Singh, K., *see* Narayanamurti, D.
Singly, R. de, 248
Sisam, J. W. B., and Whyte, R. O., 162
Sjöström, C., 111
Sjöström, H., 76, 165
Skorodumov, A. S., 138
Slagg, C. M., 114
Small, A. R. L., 273
Smaragdov, D., *see* Remezov, N. P.
Smirnova, A. D., 13
Smith, A. C., 18, 83
Smith, H. H., 76
Smith, I. C., 32, 102
Smith, J. H., and Forbes, A. C., 170
Smith, L. F., 174
Smith, R., Herriot, R. J., and Johnston, E. J., 124
— *see* Stephens, C. G.
Smith, R. H., 117
Smith, S. L., 176
Snow, A. G., 251
— *see* Dorman, K. W.
Snyder, T. E., 170
— and Zetek, J., 178
— *see* Hunt, G. M.
Sohn, A. W., 102
Sökjer-Petersen, E., 163
Sorauer, P., 114
Sosnin, L. I., 13
Sothers, D. B., 183
Southwell, B. L., *see* Biswell, H. H.
Souza Machado, A. A. de, 40
Spaulding, P., and Hansbrough, J. R., 188, 241
Spelshouse, W. E., *see* Keyser, P. V.
Spirk, L., 74
Spitzner, R., and Chiocarello, P., 104
Spoon, W., *see* Bahrfeldt, K.
Sprague, T. A., 147, 153
Spurlin, H. M., Martin, A. F., and Tennent, H. G., 176
Spurr, S. H., 220
Stacey, W. A., 245
Stahel, G., 224
Standley, P. C., 151
Staudinger, M., 237
Stearns, J. L., 16, 30
Stebbing, E. P., 55
Steere, W. C., 83
Steger, A., and Loon, J. van, 108
Stehlé, H., 79, 227
Steinbauer, G. P., 10
Steiner, A. J., 240
Steiner, W. W., *see* Stoutemyer, V. T.
Stenberg, O., Wilberg, K. V., and Hellström, N., 247
Stephens, C. G., Crocker, R. L., Butler, B., and Smith, R., 216
Stephens, R. P., 249
Stephenson, R. E., *see* Schuster, C. E.
Steven, H. M., 200
Stevens, D. R., *see* Koroleff, A.
Stevens, J. M., 106
Stevens, W. C., Harris, P., and Pratt, G. H., 180
Stevenson, D. D., *see* Meyer, H. A.
Stevenson, J. A., *see* Fowler, M. E.
Stevenson, N. S., 22
Stewart, J. L., 112
Steyn, D. G., 109
Stillinger, C. R., 47, 257
Stokoe, W. J., and Stovin, G. H. T., 18
Stone, E. L., 189, 263
Stone, J. H., and Stott, C. B., 97
— *see* Stott, C. B.
Stone, M. H., 221
Stott, C. B., Barton, W. W., and Stone, J. H., 85
— *see* Stone, J. H.
Stoutemyer, V. T., O'Rourke, F. L., and Steiner, W. W., 9
Stovin, G. H. T., *see* Stokoe, W. J.
Stretton, G. B., 228
Strickland, A. H., 73
Strong, F. C., *see* Day, M. W.
Struble, G. R., *see* Evenden, J. C.
Stuart, E., and Roeser, J., 91
Süchting, H., 138, 139
Sukumaran Kartha, A. R., and Menon, K. N., 251
Sulzberger, P. H., 95
Süssenguth, A., 75
Suto, T., 76
Swabey, C., 271
— *see* Lewis, C. B.
Swamy, B. G. L., *see* Thirumalachar, M. J.
Sweet, C. V., 206
Sweetman, H. L., 259
Swingle, R. U., Tilford, P. E., and Irish, C. F., 47
Swingler, W. S., 125
Sylvén, N., 9, 22, 147, 155, 219
Syme, P. S., 165
Symington, C. F., 153
Syrach Larsen, C., 9

Takhtadzhyan, A., 221
Tallantyre, S. B., 185
Tamm, O., 6
Tanner, H., 137
Tanret, G., *see* Colin, H.
Taranovich, N. M., *see* Nechaev, V. K.
Taskaeva, N. Ya., 78
Taylor, J. K., 6
Taylor, J. P., 32, 176
Taylor, W. L., 260
Telford, C. J., 176
Telles, A. de Q., 233
Temple, C. E., and Yost, H. E., 45
Tennent, H. G., *see* Spurlin, H. M.
Terrell, A. K. & B., 90
Terrier, J., *see* Balavoine, F.
Tharp, B. C., *see* Pötzger, J. E.
Thimann, K. V., 8
Thirumalachar, M. J., Basheer Ahmed Khan, K., and Swamy, B. G. L., 13

Thompson, A. R., 118
Thorne, G., 117
Thuriaux, L., 184
Tickle, C. G., 172
Tiemann, H. D., 179
Tilford, P. E., *see* Swingle, R. U.
Tilley, W. B., 264
Tillotson, C. R., 264
Timofeev, V. P., 199
Tirén, L., 89
Tischendorf, W., 119
Tkachenko, M. E., 120
Toler, B., 53
Tolmachev, A. I., 79
Tooke, F. G. C., 261
Tophani, P., 74
Torresi, M., *see* Ferrari, D.
Tracy, L., *see* Hawes, E. T.
Trägårdh, I., and Butovitsch, V., 43
Trapnell, C. G., 271
Trayer, G. W., 253
Treloar, L. R. G., *see* Tristam, G. R.
Trenk, F. B., 55
Trevor, J. S., 32
Tristam, G. R., Gee, G., Treloar, L. R. G., and Jeffrey, G. A., 40
Tryon, H. H., 52
Tschermak, L., 78, 148
Tumadzhanov, I. I., 13
Tureckaja, J. H., *see* Cajlahjan, M. H.
Turetskaya, R. Kh., and Maksimov, N. A., 142
Turner, H. D., *see* Plow, R. H.

Ulbrich, E., 169, 238
Ullén, G., 77
Underhill, G. W., 227
Unger, R. G., 92
Uribe-Uribe, L., 18
Urquhart, B. P., and Newman, D., 187

Vahid, S. A., 82
Vakin, A. T., 173
Van Epps, C. F., 243
Vanin, S. I., 191
Van Kleek, A., 178
Vanselow, K., 91
Van Steijn, J. A., 72
Varinois, M., 252
Vaughan, J. A., 245
Vaux, H. J., *see* Folweiler, A. D.
Veimo, R., 179
Venkata Rao, K. A., *see* Krishnaswamy, K.
Venkata Rao, K. R., 87
Venkata Rao, M. G., 90, 94
Venkataramaiyer, M., *see* Krishnaswamy, K.
Verrall, A. F., *see* Mook, P. V.
Villela, G. G., 107
Villeneuve, G. O., 43
Viswa Nath, B., 40
Vogel, F. H., 38
— *see* Day, M. W.
Voorendyk, J. J., 122
Vul'f, E. V., 5

Wachholtz, R., 214
Wadsworth, F. H., 82, 159
Wagar, J. V. K., 204
Wagner, H., 34
Wahl, H. F., 97
Wakeley, P. C., 21
Waksman, S. A., and Bugie, E., 15
Waldenström, E., *see* Brauns, O.
Walker, E. H., 81
— *see* Fosberg, F. R.
Walker, J. F., *see* Koroleff, A.
Wallace, G. B., and Wallace, M. M., 192
Wallace, J. J., 106
Wallace, M. M., *see* Wallace, G. B.
Wallace, P. P., *see* Zentmyer, G. A.
Wallihan, E. F., 141
Walter, J. M., 258
— May, C., and Collins, C. W., 192
Wang, F. H., *see* Loo, S. W.
Ward, G. B., *see* Winters, R. K.
Warne, L. G. G., 94
Warren, W. D. M., 74, 233
Waterer, R. R., 217
Waterman, A. M., *see* Hansbrough, J. R.
Watson, C. J. J., and Moore, D., 38
Watts, L. F., 54, 57
Watts, R. L., *see* Bennett, L. J.
Weaver, D., 98
Weber, G. F., 114, 190
Webster, C. C., 9
Weddell, D. J., 240
— *see* Patterson, A. E.
Wedderburn, L. C. M., 172
Weeks, D., Wieslander, A. E., Josephson, H. R., and Hill, C. L., 205
Weidman, R. H., and Berriman, C. R., 91
Weintraub, R. L., 75
Weir, A. H. W., 129–134
Welander, P. O., 158
Wennmark, G., 159
Wen-Pei Fang, 82
Wester, H. V., 188
Wetterhall, B., 30
White, J. R., 100
Whittemore, H. L., Phelan, V. B., Dill, R. S., and Luxford, R. F., 254
Whyte, R. O., *see* Sisam, J. W. B.
Wickes, D. R., *see* Lowdermilk, W. C.
Wiedemann, E., 164, 199, 229
Wienhaus, H., and Mucke, K., 185
Wieslander, A. E., *see* Weeks, D.
Wilberg, K. V., *see* Stenberg, O.
Wilde, M. H., 78
Wilde, S. A., 72
Wilke, G., *see* Lehmann, E.
Wilkins, W. H., 115
Wilkinson, T. L., 263
Williams, C. B., 69
— *see* Richart, F. E.
Williams, H. H., 142
Williams, R. M., and Oosting, H. J. 14
Wills, J. A., 121
Wilm, H. G., 7
Wilson, C. C., 155, 157
— *see* Grah, R. F.
Wilson, E., 72
Wilson, G. F., 196
Wilson, J. A., 183, 252
Wilson, J. K., 89
Wilson, R. E., 161
Wilson, S. E., 262
Wimbush, S. H., 38, 192
Winters, R. K., Ward, G. B., and Eldredge, I. F., 6
Wobst, A., 263
Wohl, A., 102
Wokes, F., Organ, J. G., James, E. M., and Melville, R., 250
Wolcott, G. N., 178
Wood, L. N., *see* Luxford, R. F.
Woodhead, T., 250
Woodson, R. E., and Schery, R. W., 13, 150
Worschitz, F., 98
Wraight, J., *see* Erickson, R. O.
Wright, J. T., *see* Horton, J. S.
Wright, J. W., 151
Wylie, N. A., 107
Wylie, R. B., 77
— *see* Plymale, E. L.
Wynne, F. E., 148

Yarham, E. R., 225
Yatsenko-Khmelevski, A. A., 25, 26
Yerkes, G. E., *see* Byrnes, J. W.
Ylinen, A., 236
Yorgiadis, A. J., and Robertson, J. M., 98
Yorston, F. H., 95
Yost, H. E., *see* Temple, C. E.
Youl, J. W., and Moulds, F. R., 241
Young, H. W., 104

Zabka, J., 81
Zachariew, B. J., 22
Zankoff, N., 39
Zentmyer, G. A., 44
— Horsfall, J. G., and Wallace, P. P., 46
— Wallace, P. P., and Horsfall, J. G., 256
Zapalov, S. M., 232
Zetek, J., *see* Synder, T. E.
Zillgitt, W. M., 164
Zimmer, F., 35
Zimmerle, H., 166, 198
Zogg, H., 150
Zugurma, J., 39
Zweig, A., 111

SPECIES INDEX

Abies, chemical composition of needles, 74; hybridization, 144; insects, 48; needle-oil emulsions, 108; ornamental species, 90; pollen deposits, 5–6; pollination, 141; strength properties, 27
A. alba, fodder, 109; foliage estimate, 220; increment, 119; in Mediterranean region, 2; in mixtures, 229; insects, 116; management, 20; Swiss varieties, 81; turpentine, 185; wet heartwood, 26
A. amabilis, 84
A. balsamea, bark removal, 240; Christmas trees, 107; disease, 254; grading rules, 183; in northwestern States, 71; insects, 18, 84, 117, 196, 261; pulp quality, 33; silvicultural requirements, 157
A. borissii, 2
A. bornmülleriana, 2
A. cephalonica, 2
A. cilicica, 2
A. concolor, 166, 187
A. equi trojani, 2
A. fraseri, 184, 220
A. grandis, 166, 229
A. lasiocarpa, 18, 84, 154, 195
A. marocana, 2
A. nebrodensis, 2
A. nobilis, 29, 166, 229
A. nordmanniana, 2, 141
A. numidica, 2
A. pectinata, see *A. alba*
A. pindrow, 86, 238
A. pinsapo, 2
A. spectabilis, 155–6
A. webbiana, 86
Acacia, bark products, 105; fodder, 109, 186; gums, 108, 185; in Natal thornveld, 149; new Peruvian species, 17–8; silvicultural requirements, 90; tannin, 250
A. acuminata, 222
A. albida, 182, 271
A. aneura, 186
A. arabica, 105, 162–3, 182–3, 266–7
A. arabica var. *cupressiformis*, 82
A. auriculata, 106–7
A. catechu, afforestation (India), 162, 163, 266–7; artificial regeneration (India), 163; distinguishing characters, 226; lac production, 185
A. catechu var. *sundra*, 167, 226, 236
A. decurrens, 193
A. decurrens var. *mollis*, 106–7
A. koa, 150
A. laliae, 106
A. leucophloea, 266–7
A. melanoxylon, 95, 142, 236
A. mellifera, 105
A. mollissima, 106–7, 165, 176
A. saligna, 159
A. seyal, 14, 105
A. sundra, see *A. catechu* var. *sundra*
A. verticillata, 165
Acanthocereus, 18
Acer, beaver damage, 194; Caucasian species, 26; description, 166; diseases, 14, 190; honey secretion, 144–5; hydrolysis, 181; insects, 50; leaf characteristics, 10–11; plywood, 174; pulp, 34, 101; sun scorch, 43; syrup, 183; virus disease, 259; wood chemistry, 27; yeast from wood sugar, 182
A. campestre, 11, 16, 261
A. monspessulanum, 11
A. negundo, disease, 254; seed treatment, 160; seedling cultivation, 231–2, 232; shelterbelt, 165; S. Russia, 214
A. opalus, 11
A. pennsylvanicum 155
A. platanoides, 115, 219, 232, 261
A. pseudoplatanus, afforestation at high elevations, 233; general account, 16; in Ireland, 215; spoil-mound reclamation, 162; varieties, 81; wood anatomy, 237
A. rubrum, 19, 141, 143, 259
A. saccharum, biochemical utilization, 38; chemical composition of leaves, 141; disease, 192, 254, 257; effect of grazing, 47, 205; exploitation for sap (Quebec), 41; in Denmark, 9–10; increment bore damage, 29; leaf decomposition, 11; leaf venation, 11; management (Quebec), 109; natural regeneration (Ohio), 87; rabbit damage, 259; seed treatment, 160; selective cutting, 164; soil moisture, 19; sugar, 252; wood properties, 27
A. saccharum var. *schneckii*, 13
A. tataricum, 231–2, 232
Aceratium, 18, 83
Achras, 252
A. zapota, 77, 218
Actinostemon, 17
Adansonia digitata, 39, 85, 192
Adesmia, 17–8
Adina cordifolia, 38
Aesculus, 166
A. hippocastanum, chemical constituents, 74, 141, 217 (2); fodder, 186 (2); in Balkans, 2; in Virginia, 13; virus disease, 259
Afro[r]mosia angolensis, 171
Afzelia africana, 172
Agathis, 57
A. alba, 102
A. robusta, 67
Aglaia, 82
Ailanthus, 227
A. altissima, 252
A. glandulosa, 23, 90, 252
Albizzia, 192, 233
A. amara, 163
A. antunesiana, 171
A. falcata, 21, 193
A. fulva, 235
A. julibrissin, 193, 257
A. lebbek, 21, 163, 214, 266–7
A. moluccana, 261
A. procera, 163
Alchornea, 18
Aleurites fordii, 9, 22, 55, 193
A. moluccana, 150
Algernonia pardina, n.sp., 17
Alnus, afforestation (China), 162; calorific value, 26–7; dye production, 40–1; insects, 49, 84; prehistory (Denmark), 5; pulp, 34; spoil-mound reclamation, 162; symbiotic associations, 215–6; taxonomy, 81; uses, 31
A. cordata, 144–5
A. cremastogyne, 55
A. glutinosa, 144–5, 198
A. incana, 217
A. incana americana, 84
A. rubra, 34, 49, 229
A. subcordata, 9–10
A. viridis, 217, 233
Alvaradoa, 227
Amblygonocarpus obtusangulus, 171
Amelanchier, 194
Amherstia nobilis, 76
Amorpha fruticosa, 214
Ampelocera latifolia, n. sp., 17
Amyelon, 5
Amyris, 25
Aniba duckei, 153
A. perutilis, 81
A. rosaeodora, 153
Anogeissus pendula, 266–7
Anthocephalus cadamba, 102
Antidesma platyphyllum, 171
A. pulvinatum, 171
Apodytes dimidiata, 249
Aporosella chacoensis, 153
Aquilaria agallocha, 251
Araucaria, 252
A. angustifolia, 103, 107, 207
A. bidwilli, 57, 95, 249
A. cunninghamii, in Queensland, 57; industry, 58; plywood, 174; standard grades, 249; wood properties, 95; wood uses, 272
A. excelsa, 107
Araucarioxylon wyomingense, 6
Arbutus unedo, 3, 217
Arthrostylidium, 227
Artocarpus, 113, 252
Aspidosperma multiflorum, 235
Astragalus, 17–8
Astronium graveolens, 81
Atalaya natalensis, n. sp., 153
Athrotaxis selaginoides, 95, 249
Aucoumea klaineana, 98
Azadirachta indica, 162–3, 163, 234, 266–7

Badusa, 83
Baikiaea plurijuga, 171, 265
Baphia, 109
Bauhinia, 17–8, 192
B. purpurea, 142
Belliolum, 77, 219
Betula, beaver damage, 194; breeding, 144–5; calorific value, 26–7; charcoal, 37; description, 166; dieback, 49; disease, 191; fodder,

109; in peat soils, 155; insects, 49 (2), 117; pitprops, 248; planting, 121; plywood, 32, 98 (3), 174; prehistory (Denmark), 5; pulp, 34; quality selection, 9; reproduction, 77; seasoning, 96; spoil-mound reclamation, 162; sprout control, 20–1; syrup, 183; tar, 247; tar oil, 104; winter water régime, 8; wood properties, 27
B. alaskana, 137
B. alba, 84, 237
B. kirghisorum, 19
B. lenta, 19, 38, 160, 259
B. litwinowii, n. sp., 17
B. lutea, description, 166; disease, 254; increment bore damage, 29; insects, 84, 260 (2); sugar, 41; wood discolourations, 171; wood properties, 27; yeast from wood sugar, 182
B. papyrifera, disease, 254; increment bore damage, 29; insects, 84, 260 (2); seed treatment, 160; silvicultural requirements, 157; sugar, 41
B. pendula, 2, 152
B. populifolia, 19, 259
B. pubescens, 152
B. pumila var. *glandulifera*, 15
B. verrucosa, 231, 232
Bignoniaceae, 153
Bikkia, 83
Billia, 149
Bombax malabaricum, 78, 152, 242
Boronia megastigma, 252
Boscia senegalensis, 39
Boswellia serrata, 179, 238, 248
Brachychiton populneum, 186
B. rupestris, 253
Brachystegia, 236
B. floribunda, 37
B. mpalensis, 184
Brownea, 17–8, 76
Bruguiera gymnorrhiza, 82
Brunellia, 18
Bubbia, 77, 219
Bucida buceras, 25
Buddleia incana, 83
Bulnesia arborea, 81
Bumelia, 17
B. lanuginosa, 13
Butea frondosa, 185
Buxus, 15, 227
B. sempervirens, 142, 182, 193

Caesalpinia, 109
Calliandra, 17–8
Callitris calcarata, 57, 88, 102
C. glauca, 67, 159
C. tasmanica, 67
Calocarpum, 252
C. odoratum, n. sp., 17
Calodendrum capense, 137, 249
Calophyllum brasiliense var. *antillanum*, 159, 248, 271
Camptotheca acuminata, 82
Canarium euphyllum, 214
Canavalia, 17–8
Capparis aphylla, 266–7
C. auriculata, 266–7
Caragana arborescens, 21, 214, 232
Carapa moluccensis, 82
Carica papaya, 192
Cariniana pyriformis, 59, 81
Carpinus, 194
C. betulus, 164–5, 186, 228
C. fangiana, 82
Carya, description, 166; in Mexico, 224; leaf decomposition, 11; plywood, 174; reproduction (Missouri), 20; soil moisture, 19
C. ovata, 79, 174
C. pecan, 174, 218
C. texana, 33
C. tomentosa, 13
Caryodendron amazonicum, n. sp., 17
Cassia, 17–8, 118
C. auriculata, 106–7, 159, 163
C. siamea, 16, 159, 163
Cassine, 149
Castanea, disease, 45, 46, 169, 257, 258; in S.W. Caucasus, 13–4; insects, 49; wood preservation, 177
C. crenata, 16
C. dentata, 16, 82, 166
C. mollissima, 16
C. sativa, cause of corrosion, 95; grafting, 141; honey, 252; in Mediterranean region, 2; in Switzerland, 88; pitprops, 248; uses, 31
C. vesca, 9–10
Castanopsis platyacantha, 234–5
Castela, 16, 227
Castilloa, 252
Casuarina, 90, 215–6, 272
C. cunninghamiana, 159, 259
C. equisetifolia, 217
C. huegeliana, 222
Catalpa bignonioides, 11, 47
C. speciosa, 13, 141
Cavanilesia arborea, 25
C. platanifolia, 25
Cedrela, 235
C. fissilis, 8
C. mexicana, 81 (2)
C. microcarpa, 152
C. odorata, 127, 235, 271
C. rehderiana, n. sp., 152
C. sinensis, 152
C. toona, 152
Cedrus, 80, 90
C. atlantica, 3, 217
C. brevifolia, 3
C. deodara, afforestation, 23; irregular stocking, 155–6; regeneration, 86, 87 (4), 91
C. libani, 3, 198
Ceiba allenii, n. sp., 13
Celtis, 224
C. kraussiana, 137, 249
C. laevigata, 33
C. mississippiensis, 218
C. pumila, 13
C. pumila, var. *georgiana*, 13
Centrosema, 17–8
Ceratonia siliqua, 11
Ceratopetalum apetalum, 95, 98, 249 (2), 272
Cercidiphyllum, 90
Cercis canadensis, 11, 12, 77
Ceriops candolleana, 82
C. roxburghiana, 106–7
Chamaecyparis, 144
C. lawsoniana, 142
Chionanthus virginica, 13
Chloroleucon, 25
Chlorophora excelsa, 16, 96, 170, 230, 238
Chrysanthemum cinerariaefolium, 39
Chrysophyllum, 252
Chusquea hispida, n. sp., 227
Cinchona, 218, 250
C. ledgeriana, 118, 184, 250
C. micrantha, 39
C. nitida, 250
C. officinalis, 39, 250
C. peruviana, 250
C. pubescens, 39
C. succirubra, 184, 250
Cirsium spinosissimum, 108
Cistus monspeliensis, 3
Claoxylon brachyphyllum, n. sp., 17
Cleidion cafcaf, n. sp., 17
Clitandra, 40
Cnidoscolus vitifolius, 153
Colliguaya, 17
Combretum, 153, 184
C. album, 184
Commersonia bartramia, 110
Copaifera chodatiana, 226
C. hymenaeifolia, 226
C. mopane, 20, 37
Corchorus, 184
Cordia goeldiana, 25
C. holstii, 192
Coriaria, 215–6
Cornus, 49, 50, 82
C. candidissima, 259
C. florida, in Missouri, 13; leaf structure, 219; photosynthesis, 75; rabbit damage, 259; soil moisture, 19; wood properties, 182
C. occidentalis, 226
C. stolonifera, 226
Corylus, 5
C. americana, 13, 84, 259
C. avellana, 73, 196
Cotinus americanus, 17
Coulteria tinctoria, 109
Coumarouna, 17–8
Crataegus, 87, 151
C. oxyacantha, 49, 85, 162, 164–5
Croton, 18
Cryptocarya erythroxylon, 235
C. glaucescens, 235
Cryptomeria japonica, 117
Cryptostegia grandiflora, 40, 108 (2), 118, 186 (3)
Cunninghamia lanceolata, 55
Cupressus, 45; see *Chamaecyparis*
C. arizonica, 23
C. benthamii, 165
C. forbesii, 192
C. lawsoniana, 165, 259
C. macrocarpa, 56, 165, 192
C. sargentii, 192
C. sargentii duttoni, 192
C. sempervirens, 3, 45, 80, 90
C. thurifera, 51
Cytisus alpinus, 108

Dacrydium cupressinum, 245
D. franklinii, 67, 252
Dalbergia, 17–8
D. sissoo, 162–3, 179
Dalea, 17–8
Dalechampia, 153
Davidia involucrata, 82
Dendrobanzia multinervia, n. sp., 17
Dendrocalamus strictus, 83
Derris, 17–8

Dicorynia paraensis, 25
Diospyros bipindensis, 172
D. lotus, 55
D. melanoxylon, 182–3
D. virginiana, 166
Dipholis salicifolia, 235
Diplotropis, 17–8
Dipterocarpus, 156, 214
D. indicus, 157
Distylium, 81
Dolichandrone falcata, 163
Dolicholobium, 83
Doryalis, 149
Doryphora sassafras, 95
Dracontomelon, 82
Drimys, 77, 219
D. brasiliensis, 77
Dubouzetia, 83
Dysoxylum, 82
D. fraseranum, 166

Elaeagnus, 215–6
E. angustifolia, 161, 214, 261
E. japonica, 165
Elaeocarpus, 83, 184
E. grandis, 95, 272
Elytrostachys, n. gen., 227
Entandrophragma caudatum, 171
E. cylindricum, 96
Eperua oleifera, 40
Erica arborea, 3
E. carnea, 142
Eriobotrya japonica, 182
Erythrina, 233
E. arborescens, 82
Erythrophloeum africanum, 171
E. micranthum, 172
Eschweilera longipes, 25
Eucalyptus, afforestation of swamps, 128; chemistry, 63–8; for farm planting, 56; general account, 17; growth characteristics and uses (Fiji), 21; in Western Australia, 221–2; insects, 261; model plantations in Argentina, 4–5; oils, 252; preservative treatment, 166; shelterbelts (New Zealand), 165; silvicultural requirements, 90
E. alba, 88
E. australiana, 63–4
E. baxteri, 223
E. calophylla, 66
E. camaldulensis, see *E. rostrata*
E. cinerea, 259
E. citriodora, 66, 88, 159, 184
E. cneorifolia, 64
E. corymbosa, 64
E. diversicolor, 236
E. diversifolia, 223
E. fasciculosa, 223
E. gigantea, 42, 95, 249
E. globulus, bridge decking, 168; disease, 259; in Peru, 72, 127; in Uruguay, 157; oil, 64
E. gomphocephala, 222
E. goniocalyx, 168
E. gullicki, 66
E. hemiphloia, 249
E. huberiana, 223
E. maculata, 88, 249, 272
E. microcorys, 184
E. nitens, 42
E. obliqua, 223
E. occidentalis var. *astringens*, 184
E. occidentalis var. *citriodora*, 184
E. odorata, 64
E. oleosa, 64
E. paniculata, 159
E. phellandra, 63–4
E. pilularis, 227
E. polybractea, 64
E. redunca, 222
E. regnans, standard grades, 249; wood chemistry, 42, 64, 95; wood properties, 236
E. resinosa, 259
E. robusta, 88
E. rostrata, 159, 223, 259, 261
E. saligna, 38, 88, 111–2, 159, 176
E. staigeriana, 66
E. viminalis, 259
Eugenia jambolana, 162–3
Euonymus, 85, 227, 259
E. americanus, 13
E. europaeus, 185
E. japonica, 141
E. velutina, 109
E. verrucosa, 109
Euphorbia, 18, 143, 149
E. calycina, 108
E. erythraeae, 108
E. tirucalli, 108
Euscaphis japonica, 82
Exospermum, 77

Fagara, 106
Fagus, 14, 27, 45, 90, 259
F. grandifolia, 19, 34, 154, 166 (2), 182
F. orientalis, 2, 13, 173 (2), 221
F. sylvatica, calorific value, 26–7; chemical properties, 27–8; climax forest in Switzerland, 221; disease, 258; distribution, 2; fodder, 186 (2); foliage estimate, 220; frost damage, 240, 256; general account, 152; hedge planting, 164–5; humus formation, 139; in Ireland, 20, 213; in mixture, 228; insects, 19, 239; nut oil, 184, 252; pitprops, 248; pollen flight, 218; pruning, 166; pulp, 244; rot fungi, 114–5; seed production, 89; shelterbelts, 24–5, 132; silvicultural requirements, 78, 215; Swiss varieties, 81; tar, 247; thinning, 164; wood anatomy, 237; wood properties, 26; wood uses, 38.
Farilea, 18
Ficus, 18, 40, 92, 252
F. elastica, 40
F. pallida, 16
F. prinoides, 16
Flemingia strobilifera, 113
Flindersia, 249
F. acuminata, 249
F. australis, 166
F. bourjotiana, 95, 249
F. brayleyana, 95, 236, 249, 272
F. pubescens, 95, 249
F. schottiana, 249
Fraxinus, description, 166; disease, 254; in Mexico, 60; insects, 50, 214; polyembryony, 10; prehistory, 5; soil moisture, 19
F. americana, 10, 87, 151, 166, 232
F. biltmoreana, 151
F. chinensis, 55
F. excelsior, cultivation with agricultural crops, 21; defects, 171; fodder, 86, 109; grafting, 9; in mixture, 228; insects, 170, 228; pest resistance, 261; physiology, 75; silvicultural requirements, 198; spoil-mound reclamation, 162; Swiss varieties, 81; uses, 31, 81; wood properties, 27, 248
F. excelsior var. *pendula*, 81–2
F. ornus, 38, 81–2, 90
F. pennsylvanica lanceolata, 33, 160, 165
Funtumia, 40, 186
F. elastica, 40

Galactea, 17–8
Garcia nutans, 40
Gardenia latifolia, 182
G. spatulifolia, 159
G. vernicosa, n. sp., 83
Ginkgo, 151, 217
Gleditsia triacanthos, cultivation with agricultural crops, 21; farm planting, 56; fodder, 186; in S. Russia, 214; in Virginia, 13; pest resistance, 261; vegetative propagation, 9
Gluema ivorensis, 238
Glyricida maculata, 113
Gmelina arborea, 21, 163
Godoya antioquiensis, 81
Grevillea banksii, 151
G. robusta, 78, 151, 249
Grewia, 184
Guadua angustifolia, 110
G. latifolia, 110
Guaiacum officinale, 81, 167, 236 (2)
Guarea carinata, n. sp., 17
Gymnocladus dioica, 13
Gymnosporia, 149

Haematoxylon brasiletto, 109
H. campechianum, 109
Hakea saligna, 151–2, 165
Halfordia drupifera, 249
Haloxylon ammodendron, 226
H. aphyllum, 23
Hamamelis virginiana, 106, 259
Hardwickia binata, 252
Helicia silvicola, 82
Heliocarpus, 25
Heterangium, 5
Hevea, chromosome number, 143; diseases, 193; hybrids, 153; nutrient requirements, 188; planting, cultivation, etc., 40
H. benthamiana, 153
H. brasiliensis, 40, 153, 185, 262
H. guianensis, 153
H. lutea, 153
H. spruceana, 153
Hibiscus elatus, 271
H. similis, 102
Hippomane, 252
Hippophaë, 215–6
H. rhamnoides, 22, 144–5
Holacantha, 227
Hopea parviflora, 86
Humiria, 149
Humiriaceae, 25
Hura, 252
Hydnocarpus anthelmintica, 185
H. wightiana, 185

Ilex, 76, 90, 259
I. aquifolium, 164–5

I. capensis, 249
I. decidua, 76
I. monticola, 76
I. opaca, 76, 227
I. verticillata, 76, 259
I. vomitoria, 76
Illicium henryi, 82
I. szechuanensis, 82
Inga, 17–8, 18, 233
I. coragypsea, n. sp.,18
Inocarpus edulis, 262
Isoberlinia, 236
Itea omeiensis, 82

Jatropha, 17, 153, 252
J. froesii, n. sp., 17
Joosia pulcherrima, n. sp., 83
Juglans, chemistry, 46, 250; disease, 46, 192; in Mexico, 224; insects, 239; mycorrhiza, 73; pollen as source of infection, 115, 257; utilization, 53
J. cinerea, 15, 166, 226
J. nigra, disease, 48, 257; description, 166 (2), 226; farm crop, 56; shelterbelt, 165
J. regia, 2, 50, 117, 261
J. rupestris, 108
Juniperus, 41, 109, 221
J. chinensis var. *variegata*, 112
J. communis, 2, 227
J. communis var. *hibernica*, 80
J. drupacea, 2
J. excelsa, 2
J. foetidissima, 2
J. horizontalis, 112
J. lucayana, 271
J. oxycedrus, 2
J. phoenicea, 2
J. scopulorum, 114, 165
J. thurifera, 2
J. utahensis, 81, 84
J. virginiana, description, 166; disease, 15; in Missouri, 13; in S. Russia, 214; pioneer species, 12, 79; shelter-belts, 165; soil moisture, 19; tree-ring characteristics, 198

Keteleeria davidiana, 10
Kiggelaria africana, 137
Krameria, 17

Laburnum, 259
L. anagyroides, 162
Lacunaria panamensis, n. comb., 13
Landolphia, 40
Lansium dubium, 82
Laplacea brenesii, 235
Larix, disease, 191; fire resistance, 190; hybridization, 10, 76, 144, 219, 225; in mixture, 228; lammas shoots, 142; nutrient requirements, 43; pulp, 34; vegetative reproduction, 141; wood properties, 8
L. dahurica, 160
L. decidua, disease, 190, 191; grafting, 9; growth data, U.S.S.R., 199; hybridization, 9–10; insects, 19, 49, 116; nutrient uptake, 138; plantations in Ireland, 20; regeneration, 88; spoil-mound reclamation, 162; wood anatomy, 237; wood properties, 248
L. eurolepis, 88, 225
L. kaempferi, 20, 144
L. laricina, description, 166; in S. Yukon, 137; insects, 18, 48, 84; pulp, 34, 101
L. leptolepis, see *L. kaempferi*
L. occidentalis, chemistry, 28; insects, 18, 84; pre-history, 213; pulp, 34; squirrels, 47; triploids, 10
L. sibirica, 120, 141, 199, 231
Lecointea, 17–8
Lecostemon, 151
Lepidocarpon, 5
Lepidondendron, 5
Leptospermum, 67
L. citratum, 252
Libocedrus decurrens, 94
Licanea arborea, 40
L. rigida, 40
Licaria duartei, n. sp., 83
Ligustrum lucidum, 55
L. vulgare, 252
Linociera, 82
Liquidambar orientalis, 185
L. styraciflua, 33, 34, 38, 98, 185
Liriodendron tulipifera, 11, 166, 169-70
Lithocarpus densiflorus, 187, 250
Litsea reticulata, 95, 249
Lophira alata, 172
L. procera, 238
Lucuma, 252
Lupinus, 17–8
Lycium barbarum, 214

Macadamia ternifolia, 151–2
Machaerium, 17–8
M. capote, 18
Maclura pomifera, 38, 165
Macrolobium, 17–8
Macrozamia, 66, 85
Madhuca longifolia, 218
Magnolia acuminata var. *cordata*, 16
M. blumei, 102
M. cordata, 16
M. grandiflora, 220
M. officinalis, 82
Mangifera indica, 179, 180, 192, 248, 249, 271
Manihot, 153
M. glaziovii, 40
Manilkara hexandra, 218
Melaleuca, 67
M. alternifolia, 252
M. linariifolia, 252
Melia azedarach, 23
Mesoxylon, 5
Metrosideros collina, 150
Michelia bodinieri, 82
M. wilsonii, 82
Mimosa, 17–8
Mimusops elengi, 251
Mischocarpus, 82
Moringa concanensis, 107
Morus, 224
Morus alba, afforestation, 23; cuttings, 8; disease, 46; in S. Russia, 214; pest resistance, 261; seedlings, 231, 232
Mouriria densifoliata, n. sp., 17
Myrciaria jaboticaba, 49
Myrica, 215–6
Myristica, 217
M. dactyloides, 103
M. fragrans, 220
Myroxylon balsamum, 81

Nauclea, 83
Neonauclea, 83
Nerium oleander, 8
Neurolepis pittieri, n. sp., 227
Newbouldia laevis, 234
Nothofagus, 77
N. cunninghamii, 272
N. menziesii, 241
N. obliqua, 229
N. procera, 229
Notobuxus, 15

Ochrocarpus, 82
Ochroma, general account, 16, 235; in Ceylon, 161; in Colombia, 59; in Costa Rica, 59; in Ecuador, 57; nomenclature, 83; seed extraction, 22; substitutes, 25; uses, 31
O. lagopus, 83
O. limonensis, 21
Ocimum kilimandscharicum, 108
Olea africana, 159
O. cunninghamii, 241
O. europaea, 1, 8, 90
O. oleaster, 11
Omphalea oleifera, 25
Onchoba echinata, 196
Opuntia, 18
O. ficus-indica, 217
Orbignya cuatrecasana, n. sp., 14
Ormosia, 17–8
Ormosiopsis, 17–8
Ostrya, 79. 224
O. virginiana, 19
Ougeinia dalbergioides, 182
Ouratea, 227
Oxydendrum arboreum, 148

Pachira aquatica, 19
P. insignis, 19
Pandanus thurstonii, 262
Parinarium campestre, 25
Parkia biglobosa, 271
P. oliveri, 182
Parrotia jacquemontiana, 87, 182
Parthenium argentatum, 40, 109, 196
Pedilanthus, 18
Peltophorus, 109
Pera aperta, n. sp., 13
P. bicolor, 149
Peschiera cymosa, n. comb., 14
Photinia benthamiana var. *obovata*, n. var., 82
Phyllanoa colombiana, n. sp., 18
Phyllanthus acuminatus, 153
P. madeirensis, n. sp., 83
Phyllocladus rhomboidalis, 95, 236
Phyllostachys heteroclada, 55
Phyllostylon brasiliensis, 149
Phytolacca dioica, 186
Picea, chemical properties, 168; cost of sawing, 33; description, 166; disease, 191; frost damage, 255; grading rules, 183; growth forms, 155, 219, 225; hydrolysis of wood, 181; increment, 199; insects, 117, 196, 261, 263; management, 221; microbiology of bark, 239; mixtures, 163; ornamental species, 90; pollen

flight, 218; pollen storage, 8; pollination, 141; plywood, 99; pulp quality, 33, 172, 244; silvicultural requirements, 43; soil moisture, 19; storm damage, 255; types of forest, 13; utilization, 243, 253; wood chemistry, 28; yeast from wood sugar, 182; yield, 263
P. abies, breeding, 144, 145, 155, 219; calorific value, 26–7; soil deterioration in Switzerland, 86, 221; Christmas trees, 107; cuttings, 8; disease, 191 (3); fire resistance, 190; foliage estimate, 220; growth, 119, 199; humus formation, 139; hydrolysis, 248; in Balkans, 2; increment, 56; insects, 48; management, 20 (2); nutrient uptake, 138; pollination, 141; provenance, 143; rabbit damage, 259; seed production, 76–7, 89; seed quality, 22; Swiss varieties, 81; tar, 247; testing of seedlings, 78; thinning, 24, 91; variability of cone scales, 11; wood anatomy, 237; wood properties, 27; wood wool, 243–4
P. alba, see *P. glauca*
P. engelmanni, insects, 18, 84, 195; selective cutting, 86; shelterbelts, 165; squirrels, 154
P. excelsa, see *P. abies*
P. glauca, bark removal, 240; Christmas trees, 107; grafting, 219; insects, 18, 48, 84; in S. Yukon, 137; silvicultural requirements, 157–8
P. mariana, apparent photosynthesis in winter, 75; bark removal, 240; in S. Yukon, 137; insects, 18, 84; natural regeneration, 158; silvicultural requirements, 157; wood anatomy, 237
P. morinda, 238
P. omorika, 2
P. orientalis, 2, 141
P. pungens, 8, 154, 160, 165
P. rubra, 9, 18, 84
P. sitchensis, in Ireland, 20; in mixture with Larch, 229; insects, 18, 84; kiln-drying, 246; pulp, 34, 71; seed treatment, 160; shelterbelts in Britain, 24–5, 132; spoil-mound reclamation, 162; wood properties, 95
Picramnia, 227
Picrasma, 227
Picrolemma, 227
Pinus, aerial sowing, 160; annual ring formation, 199; bark extracts, 28; biochemical utilization, 38; charcoal, 37; decomposition of leaves, 11; diseases, 14, 45, 114; ground flora favouring establishment, 216; in peat soils, 155; in S. America, 60; insects, 49, 195, 214; mycorrhiza, 138; ornamental species, 90; pollen flight, 218; pollen storage, 8; Portuguese species, 14; pulp, 34, 169; quality of S. African timbers, 96; soil moisture, 138; stocking systems (India), 155–6; tannin, 39; vegetative reproduction, 9, 141–2; wood chemistry, 224, 237; wood properties, 27; wood wool, 186, 243; yield, 263
P. albicaulis, 44–5
P. australis, 190
P. austriaca, see *Pinus nigra* var. *austriaca*
P. banksiana, bark removal, 240; competition, 53; cost of slash burning, 30; disease, 48; foliage estimate, 220; grading rules, 183; in New Zealand, 229; insects, 18, 48, 84, 117, 195; management, 43, 120; natural regeneration, 158; shelterbelts, 165; silvicultural requirements, 157; wood chemistry, 28; wood properties, 248
P. brutia, see *P. halepensis* var. *brutia*
P. canariensis, 23
P. caribaea, breeding, 10; disease, 190, 256; establishment in S. Carolina, 160; financial yield (Florida), 201; in Nyasaland, 229; seedling growth, 23; spacing, 231; stimulation of gum flow, 251 (2); taxonomic status, 80; utilization of thinnings, 38
P. cembra, 118, 191
P. clausa, 190
P. contorta, in Ireland, 20; influence on water yield, 140; insects, 84; prehistory, 213; seedling growth, 198; shelterbelts in Britain, 24–5; squirrels, 47, 154
P. contorta var. *murrayana*, disease, 259; in Ireland, 21; in New Zealand, 229; in S. Yukon, 237; influence on water yield, 216–7; seed treatment, 160
P. echinata, disease, 190; in Missouri, 207; in Virginia, 13; insects, 227; management, 200; pulp, 101–2; shelterbelts, 165
P. edulis, 257, 261
P. excelsa, 23, 107, 155–6
P. flexilis, 79, 154
P. glabra, 190
P. halepensis, 23, 90, 198
P. halepensis var. *brutia*, 2, 90
P. insignis, see *P. radiata*
P. insularis, 102
P. jeffreyi, 160
P. lambertiana, 44–5, 160, 168, 223, 256
P. laricio, see *P. nigra* var. *corsicana*
P. leucodermis, 2
P. longifolia, 23, 101, 229
P. maritima, see *P. pinaster*
P. massoniana, 55
P. merkusii, 102
P. monophylla, 81, 257
P. montana, see *P. mugo*
P. monticola, 15, 44–5, 92, 168, 213
P. mugo, 2, 28, 218, 231
P. muricata, 165, 259
P. murrayana, see *P. contorta* var. *murrayana*
P. nigra, germination, 22; insects, 116; in S. Russia, 214; shelterbelts, 24, 132; silvicultural requirements, 2, 90; wood chemistry, 28
P. nigra var. *austriaca*, 39, 75, 116, 162, 195, 229
P. nigra var. *corsicana*, disease, 259; farm planting, 56; in mixture, 228; in Victoria, 86; on poor sites, 21, 159; shelterbelts, 165; spoil-mound reclamation, 162
P. palustris, breeding, 10; disease, 190, 191; fire: effect on radial growth, 263, effect on taper, 189, 197; hydrolysis of wood, 181; pollen size, 148; seedling growth, 9, 23 (2); stimulation of gum flow, 251; wood chemistry, 28; wood properties, 96
P. patula, 176, 229
P. peuce, 2, 39, 160
P. pinaster, farm planting, 56; natural regeneration, 157; on poor sites, 159; pulp, 176; shelterbelts, 165; silvicultural requirements, 90
P. pinea, 90, 108
P. poiretiana, 2
P. ponderosa, annual ring formation, 198; chemical properties, 168; cutting cycles, 201; disease, 88, 259; farm planting, 56; fire-hazard classification, 240; foliage estimate, 220; hydrolysis, 248; in Australian Capital Territory, 90; in New York State, 88; in New Zealand, 229; in Victoria, 86; management, 264 (2); plywood, 61, 174; pruning, 234; pulp, 33; seed treatment, 160; thinning, 91; vegetative reproduction, 9; wood properties, 94
P. ponderosa var. *scopulorum*, 116
P. radiata, concrete reinforcement, 111; farm planting, 56; girdling, 24; in Australia, 57, 86, 90, 216, 233; in Colombia, 140; in New Zealand, 229, 272; interception of rainfall, 268; matches, 272; mixture with Larch, 229; mycorrhiza, 215 (2); on poor sites, 159; preservation against termites, 177; pulp, 176; shelterbelts (New Zealand), 165; silvicultural requirements, 90; space and increment, 230; spindle growth, 255; wood properties, 236, 241
P. resinosa, competition, 53; disease, 114, 191; foliage estimate, 220; grading rules, 183; insects, 18, 48, 84 (2), 195; management, 120; mycorrhiza, 7; rabbit damage, 25; silvicultural requirements 20; strength properties, 248
P. rigida, competition, 53; in New Zealand, 229; insects, 117; seed treatment, 160; soil moisture, 19; tar, 247
P. serotina, 190
P. 'southern', hydrolysis of wood, 181; plywood, 61; preservation, 34, 35; pulp, 33, 101; soap, 39; yeast from wood sugar, 182
P. strobus, axis restoration, 77; cuttings, 8; description, 166; disease, 44 (2), 114, 188, 259; fire-hazard classification, 240; foliage estimate, 220; grading rules, 183; in mixture, 229; in New Zealand, 229; insects, 18, 28, 48, 84, 116, 195; management, 20; pruning,

166; rabbit damage, 259; ring formation, 198; sapling growth, 119; seasoning, 104, 246; seed treatment, 160; seed weight, 220; soil moisture, 19; wood chemistry, 28 (2)
P. sylvestris, apparent photosynthesis in winter, 75; bark anatomy, 148; bark oil, 185; breeding, 76, 143, 145; calorific value, 26–7; competition, 53; cones, number, 11; crown determination in seedlings, 78; disease, 114, 190, 191, 258, 261; fodder, 109; foliage estimate, 220; germination, 89; grafting, 9; growth data (U.S.S.R.), 199; growth forms, 147; humus formation, 139; in Great Britain, 225; in Ireland, 20, 213; in Mediterranean region, 2; in New Zealand, 229; increment, 56; insects, 48, 84, 116, 195, 228, 261; mycorrhiza, 73, 138, 139; nutrient uptake, 138; on poor sites, 139, 159; photoperiodism and provenance, 142; pulp, 245; resin, 39 (2); rosin, 185; seed production, 76–7; seedling growth, 143–4; shelterbelts, 24–5, 132; silvicultural requirements, 155 (3), 231, 232; spoil-mound reclamation, 162; Swiss varieties, 81; tar, 247; thinning, 24; wood chemistry, 145, 169, 236–7; wood structure, 25; wood wool, 243–4
P. taeda, disease, 114, 190; effect of fires, 12; in N. Carolina, 71; insects, 227; management, 200; photosynthesis, 75; pulp, 101, 176; seed origin, 21; seed production and dispersal, 230; utilization of thinnings, 38
P. thunbergii, 162
P. yunnanensis, 10
Piptadenia, 17–8, 185
P. africana, 172, 238
P. communis, 15
Pithecolobium, 17–8
Planchonella samoensis, 249
Platanus, 115, 117, 165
P. acerifolia, 162, 232, 258
P. occidentalis, 84, 165, 166, 174
Podocarpus allenii, 150
P. amara, 102
P. andina, 78
P. chinensis, 216
P. coriacea, 79
P. falcata, 137
P. imbricata, 102
P. lambertii, 107
P. latifolia, 137
P. nubigena, 216
P. sellowii, 107
P. spicata, 78, 168, 241
P. usumbarensis, 271
Poinciana insignis, 109
Polylepis, 18
Pongamia glabra, 163
Ponteria, 81
Populus, afforestation (China), 162; beaver damage, 194; competition, 190; description, 166; disease, 46, 48, 215, 258, 259; erosion control in south-western U.S.A., 161; fodder, 109, 186; hybridization, 76, 143, 144; in Denmark, 9–10; in Mexico, 224; insects, 48, 84, 118, 261; plywood 32, 98; pulp, 102, 244; silvicultural requirements, 157–8, 159 (2); spoil-mound reclamation, 162; utilization, 31
P. alba, 56, 143–4, 145, 158, 228
P. bachofenii, 143–4, 158
P. balsamifera, see *P. tacamahaca*
P. berolinensis, 158
P. bolleana, 143–4
P. canadensis, 143–4, 145, 152, 158
P. canadensis var. *eugenii*, 49
P. candicans, 143–4
P. canescens, 13, 143, 218 (2)
P. deltoides, 34, 159, 165
P. deltoides var. *virginiana*, 22, 33
P. euphratica, 8, 267
P. grandidentata, 166, 240
P. hybrida, 158
P. laurifolia, 143, 158
P. moscoviensis, 143–4
P. nigra, cytology, 76; disease, 15, 258; farm planting, 56; hybridization, 143–4; insects, 84; pest resistance, 261; water conservation, 158; wood anatomy, 145, 237
P. nigra var. *fastigiata*, 258
P. nigra var. *italica*, 8, 11, 49, 143–4, 165
P. pyramidalis, see *P. nigra* var. *italica*
P. simonii, 143–4, 158
P. suaveolens, 143–4
P. tacamahaca, description, 166; hybridization, 143–4; in S. Yukon, 137; silvicultural requirements, 152, 158
P. tremula, breeding, 143–4, 145–6; calorific value, 26–7; grafting, 9–10, 218; insects, 258; leaves, chemistry, 217; provenance, 9–10; reproduction, 77; vegetative propagation, 218; water conservation, 158; wood chemistry, 145; wood properties, 27; wood wool, 243–4
P. tremuloides, bark removal, 240; description, 166; disease 46 (2); grading rules, 183; in S. Yukon, 137; influence on water yield, 140; insects, 49 (2); pulp, 34; root system, 219
P. tremuloides aurea, 75
P. trichocarpa, 49, 218
P. tristis, 143–4
Pretina, 25
Prosopis, 38
P. chilensis, 127, 150
P. juliflora, 109, 186, 266–7
P. spicigera, 266–7, 267
Prunus, 81, 87, 162, 194, 259
P. americana, 250
P. angustifolia, 250
P. domestica, 108
P. emarginata, 49
P. laurocerasus, 219
P. padus, 85
P. pennsylvanica, 19, 254
P. serotina, 154, 166, 228, 259, 261
Pseudobombax subandinum, n. sp., 14
Pseudocopaiva hymenaefolia, 235
Pseudosindora palustris, n. sp., 153
Pseudotsuga taxifolia, breeding, 9–10; cause of corrosion, 95; Christmas trees, 107; direct seeding, 89; disease, 190; farm planting, 56; fire exposure tests, 96; fire hazard, 240; foliage estimate, 220; grafting, 9–10; growth rings, 51; hydrolysis of wood, 181, 248; in Alberta, 79; in Britain, 225; in Ireland, 20; insects, 18, 49, 84, 195, 260; kiln drying, 246; plywood, 61, 89, 174, 242, 243; pulp, 34; regeneration, 264; seed treatment, 160; squirrels, 154; utilization, 97, 187; veneer thickness conversion table, 98; wood properties, 27, 236; yeast from wood sugar, 182
Pseudowintera, 77, 219
Ptelea, 21
Pterocarpus, 109
P. angolensis, 171
P. dalbergioides, 214
P. delevoyi, 184
P. soyauxii, 172
Pterostyrax hispidus, 82
Purinarium campestre, 108
Pygeum, 106
Pyrus, 14
P. aucuparia, 217
P. georgica, n. sp., 17
P. georgica var. *glabra*, n. var., 17
P. salicifolia var. *angustifolia*, n. var., 17

Quararibea spatulata, n. sp., 17
Quassia, 227
Quercus, calorific value, 26–7; cause of corrosion, 95; coppice, 228; disease, 48, 114, 192 (2); fodder, 186 (2); frost damage, 188, 255; grafting, 9–10; hydrolysis of wood, 181; in Armenia, 221; in Costa Rica, 60; in Mexico, 224; in mixture, 163 (2), 228–9; in Sweden, 152, 205; in Switzerland, 78; insects, 18, 84, 117; leaf decomposition, 11; phenology, 155; pollen flight, 218; pollen storage, 8; Portuguese species, 14; prehistory, 5 (2); preservation, 35; reproduction (Missouri), 20; seedling treatment, 231; Swiss varieties, 81; utilization, 31; wood properties, 27, 95, 248
Q. acutissima, 234
Q. alba, disease, 115, 192; grading rules, 30; in South America, 60; photosynthesis, 75; seed production, 229; silvicultural requirements, 263–4; soil moisture, 19
Q. arizonica, 17
Q. borealis, 51, 192, 240, 263–4
Q. borealis var. *maxima*, 19, 75, 115 229, 263–4
Q. cerris, 17, 90, 107
Q. chrysolepis, 220
Q. coccifera, 90
Q. coccinea, 13, 19, 192, 229
Q. dumosa, 154
Q. ellipsoidalis, 15
Q. emoryi, 17
Q. faginea, 11
Q. ilex, 90
Q. ilicifolia, 19
Q. incana, 258

Q. laurifolia, 259
Q. lucombeana, 17
Q. macrocarpa, disease, 115, 192; insects, 84; leaf venation, 11; shelterbelts, 165; silvicultural requirements, 142, 263–4
Q. marilandica, 13, 14
Q. mirbeckii, 107
Q. montana, 39, 154, 225, 229, 250
Q. muehlenbergii, 13
Q. palustris, 263–4
Q. pedunculata, see *Q. robur*
Q. phellos, 250
Q. pubescens, 90
Q. robur, cultivation with agricultural crops, 21; description, 17; frost damage, 255; insects, 49; Russian types, 152; silvicultural requirements, 159, 161; wood anatomy, 237
Q. rubra, 15, 248
Q. sessiliflora, 17, 152, 159, 161, 255
Q. stellata, 13 (2)
Q. suber, in Portugal, 11; in Tunisia, 107; in Turkey, 107; in U.S.A., 39; insects, 84; seeding, 22; silvicultural requirements, 90
Q. velutina, 19, 115, 192, 229
Q. virginiana, 80
Q. wislizenii var. *frutescens*, 154

Randia, 83
Rapanea mccomishii, n. sp., 153
R. melanophleos, 249
Rauwolfia, 252
Recchia, 227
Reevesia lancifolia, n. sp., 82
Rehderodendron macrocarpum, 82
Rhamnus, 259
R. caroliniana, 13, 38
R. cathartica, 190
Rhizophora, 82
Rhododendron, 82
Rhus, 251
R. javanica, 55
R. typhina, 259
R. verniciflua, 38, 55
Ribes, 256, 257
Robinia hispida, 89
R. pseudoacacia, afforestation (China), 162, (India), 23; durability, 238; fertilizer treatment, 73; general account, 159, 166; heterogeneous forms, 226; oil, 108; pest resistance, 261; shelterbelts, 165; silvicultural requirements, 226; S. Russia, 214; utilization, 29, 226; virus disease, 259; wood properties, 27
R. pseudoacacia var. *monophylla*, 226
R. viscosa, 89
Rosa alpina, 108
Rutaceae, 167

Saccopetalum tomentosum, 182
Salix, afforestation at high elevations, 233; beaver damage, 194; erosion control in southwestern U.S., 161; fodder, 186; in Mexico, 224; insects, 18, 19, 48, 49, 84, 118; spoil-mound reclamation, 162; uses, 31
S. alba, 165
S. alba var. *coerulea*, 227
S. alba var. *vitellina*, 165
S. atrocinerea, 49
S. babylonica, 258, 259
S. bebbianae, 84
S. caprea, 141–2, 142, 154
S. cardiophylla, 76
S. cinerea, 250
S. filicifolia, 250
S. fragilis, 15, 259
S. glauca, 16
S. hookeriana, 49
S. humboldtiana, 12–3
S. interior, 218
S. lapponum f. *boydii*, 16
S. lasiandra, 49
S. lasiolepis, 259
S. nigra, 33, 218
S. pedicellata, 84
S. rostrata, 15
S. scouleriana, 49
S. triandra amygdalina, 250
S. viminalis, 8, 250, 259
Sambucus, 259
S. nigra, 162
Santalum album, 90 (3), 94 (3), 119, 251
Sapium, 17, 18, 252
S. haematospermum, 186
S. haematospermum var. *saltensis*, n. var., 17
Saraca indica, 76
Sarcocephalus cordatus, 235
S. diderrichii, 170, 238
Sassafras officinale, 38, 259
Schima crenata, 234–5
Schinopsis, 215
Schinus, 227
Schizomeria ovata, 95, 272
Schleichera trijuga, 185
Schrebera swietenioides, 182
Sclerolobium, 17–8
Scleropteris, 5
Sebastiania, 17
Sequoia, 85, 95, 237 (3), 269
S. gigantea, 7, 15, 219
S. sempervirens, bark chemistry, 238; barking, 96; casehardening, 179; description, 166 (2); dyeing, 177; farm planting, 56; heartwood resistance to termites, 170; mycorrhiza, 7; plastics, 33, 176; tetraploids, 219; utilization, 187
Sericolea, 18, 83
Shorea, 102
S. robusta, in Mayurbhanj, India, 149; irregular stocking, 155–6; outturn, 56; post protection, 112; regeneration, 20, 163; yield and stand tables, 119
Sideroxylon, 252
S. foetidissimum, 235
S. pohlmanianum, 235
Simaba, 227
Simarouba, 81, 227
Sloanea, 83
S. brachytepala, n. sp., 17
S. terniflora, n. comb., 151
Sophora chrysophylla, 150
S. japonica, 261
Sorbus americana, 259 (2)
S. aucuparia, afforestation at high elevations, 217, 233; alcohol yield, 217; fodder, 186; insects, 49; reproduction in Sweden, 158; spoil-mound reclamation, 162
Spirostachys africana, 159
Staphylea holocarpa, 82
Staudtia kamerunensis, 172
Stemmadenia, 252
S. lagunae, n. sp., 13
Sterculia alata, 179
S. diversifolia, 142
S. tomentosa, 108
S. urens, 238
Sterigmapetalum colombianum, n. sp., 18
Stillingia, 17
Stipitopteris, 5
Strombosia pustulata, 245
Stuebelia nemorosa, 18
Stylosanthes, 17–8
Styrax, 82
S. hemsleyanus, 82
S. japonicus, 82
S. subcrenata, 224
S. suberifolius, 82
Suriana, 227
Swartzia, 17–8
Swietenia, 83
S. macrophylla, 21, 81, 127, 235
S. mahagoni, 174
Sycopsis, 81
Symplocos ernesti, 224
S. hainanensis, n. sp., 82
S. howii, n. sp., 82
S. kwangtungensis, n. sp., 224
S. punctato-marginata, 82
S. spathulata, n. sp., 224
S. tinctoria, 38
Syncarpia laurifolia, 159

Tabebuia, 259
T. chrysantha, 81
T. ipe, 153
T. nodosa, 153
T. pallida, 82
T. pentaphylla, 81, 82
Tabernaemontana, 252
Tamarix, 267
T. articulata, 161
T. gallica, 12, 193
Taxodium distichum, 166
T. mucronatum, 25, 51, 140
Taxus, 141–2, 220
T. baccata, 81, 151 (2), 164–5, 196
Tectona grandis, effect of stump diameter on survival, 23; growth characteristics and uses (Fiji), 21; heartwood, resistance to termites, 170; in mixture, 89; insects, 113; plantation technique, 89; regeneration, 87–8, 158; seed origin, 147 (2); stocking systems (India), 155–6; thinning, 164; undergrowth and control of defoliators, 259–60
Telfairia pedata, 192
Terminalia, 184
T. australis, 153
T. bialata, 214
T. latifolia, 271
T. myriocarpa, 249
T. triflora, 153
Tetracentron, 16
Tetrorchidium, 252
Thalictrum, 76
Theobroma asclepiadiflorum, n. sp., 13
T. cacao, 196
Thevetia, 252
Thuja, 15, 227
T. gigantea, 219
T. occidentalis, 18, 84, 177, 225
T. orientalis, 45

T. plicata, 34, 36, 84, 95, 259
Tilia, 27, 31, 75, 183, 186
T. americana, 11, 29
T. argentea, 252
T. cordata, 144–5
T. europaea, 252, 261
T. glabra, 166
T. sylvestris, 252
T. tomentosa, 2
Toisusu cardiophylla, 76
Trema orientalis, 102
Trichilia emetica, 108
T. lamelulata, n. sp., 14
Tristania laurina, 235
Triumfetta, 184
Trochodendron, 16
Tsuga, 90, 91, 144, 168
T. canadensis, annual ring formation, 198 (2); barking, 250; cuttings, 8; description, 166; disease, 15; in Alabama, 15; increment, 51; insects, 18, 19, 84, 117; pioneer species, 79; soil moisture, 19; soil reaction in relation to distribution 221; tanbark deterioration, 39
T. heterophylla, decay following logging injury, 114; in Ireland, 20; insects, 18, 84; management, 51; resources in Pacific northwest, 71; timber defects, 29 (3)
T. mertensiana, 141
T. pattoniana, see *T. mertensiana*
Tutcheria ovalifolia, n. sp., 82

Ulmus, description, 166; disease, 47, 192, 214, 256 (2), 259; fodder, 186; in Mexico, 224; insects, 18, 49, 117, 118, 196; natural regeneration (Ohio), 87; uses, 31
U. americana, bottle grafting, 144–5; description, 166; disease, 47, 115, 193; effect of fungi on nutrient availability, 7; frost damage, 188; in Indiana, 51; leaf venation, 11; natural regeneration (Ohio), 87; pulp, 33; rabbit damage, 259; shelterbelt, 165
U. campestris, 18, 118, 144–5
U. effusa, 232
U. fulva, see *U. pedunculata*
U. glabra, 144–5, 162, 232, 248
U. laevis, see *U. pedunculata*
U. montana, see *U. glabra*
U. pedunculata, 12, 144–5
U. procera, 18, 50
U. pumila, 43

Valeria indica, 157
Vantanea, 60
Virola guatemalensis, 153
Vitis lincecumii var. *glauca*, 13
Vochysia, 25
V. urubuensis, n. sp., 17

Widdringtonia cupressoides, 15
Winteraceae, 16, 77 (2), 219
Wisteria sinensis, 142

Xylia dolabriformis, 89, 158, 164
X. xylocarpa, 40
Xymalos monospora, 137, 249

Zanthoxylum clava-herculis, 117
Zizyphus, 149
Z. jujuba, 163, 185, 266–7
Z. spina-christi, 182
Zygogynum, 77

SUBJECT INDEX

ACCIDENT rates, 53, 201
Accidents: power saw, 53; prevention, 53, 201
Acetic acid in wood, 168 (2)
Acetone recovery, 246
Adhesives, *see* Glues
Aerial photography, 121
Afforestation, 72, 90–1, 162–3, 233; legislation: 123, (Indiana) 124; programme: (Roumania) 55; policy: (Eire) 270, (Great Britain) 270, (N.W. India) 205
Aircraft construction, use of wood, 29, 38 (4), 98 (2), 100, 106 (2), 167, 174, 246
Aircraft in forestry, 47, 121, 194
Alcohol production, 105, 110, 180, 181 (2), 182 (3), 217, 248
'Amberwood', 243
Ambrosia beetles, 170
Anatomy: floral, 220 (2); leaf, 11, 77 (2); vascular, 219 (2); wood 25 (3), 94 (2), 167, 235; taxonomic value, 167 (2)
Annual rings, *see* Rings, growth
Arboriculture, 23, 90, 162, 232–3
Aspect, 78
Association for Breeding Forest Trees [Sweden], 76, 144, 145

BACTERIAL plant pathogens, classification, 15
Balsa substitutes, 25
Bamboos: management, 83; utilization, 110
Banding injury, 50
Bark, anatomy and chemical composition, 148, 237 (3)
Bark extracts, 28
Barking, 96, 97, 240–1
Beaver damage, 194
Bedrock, influence on forest types, 11
Bibliographical information service, 212
Birds, insect-eating, 260
Bleaching of wood, 102
Blight: Arborvitae, 45; Cedar, 114; Walnut, 257
Blister rust, 44 (2), 45, 114 (2), 191, 223, 256–7
Bonding, *see* Gluing
Bottle grafting, 144, 219
Brashing, 92, 165
Breeding, tree, 9, 10, 21, 76 (2), 77, 143, 144, 145, 147 (4), 218, 219 (3). *See also* Cytology: Hybridization: Seed origin
Bridge-decking, 168
Bridges, timber, 42, 111
Brooming in Chinese Elm, 43
Building construction, 42 (3), 110, 111 (2), 187 (4), 188, 254
Bush-burning, effects in Africa, 190

CALORIFIC value of wood, 27
Camps, portable, 42
Canker of Monterey Cypress, 192
Canker, stem, 191
Carotine determination, 217
Case-hardening, 104, 179, 240
Catalposide, 141
Caterpillars of British butterflies, 18
Cellulose: chemistry, 176 (2), 237; determination, 145; recovery from wood, 102; utilization, 57
Cellulose-containing species, 105, 238
Chapparal burning, effects on soil, 189
Charcoal: briquettes, 105, 247; identification, 94 (2); manufacture, 37 (4), 105 (2), 180 (3), 247–8; species, 37 (3). *See also* Kilns: Producer gas
Check lists: Lesser Antilles, 79; Shenandoah National Park, 13
Chemical constituents of plants, 141 (3), 217 (6)
Chemical treatment of wood, 33, 243, 244. *See also* Fireproofing of timber: Preservation of timber: Seasoning, chemical
Chemicals, effect on wood, 100
Chemistry, wood, 28 (3), 63–8, 95, 144, 145, 224
Chemotherapy, tree, 192
Chlorophyll determination, 217
Chlorosis, treatment, 23 (2)
Christmas trees, 107, 184, 250
Cicatrization layer, formation, 75
Cinchona bark, 39, 184 (2), 250
Climate, local: influence on forests, 148; on soil moisture, 7
Climax vegetation, tropical America 149
Coffee tree shading, 233
Colchicine treatment, 219 (2)
Colonization, forest, 122, 204
Community forest, 123, 204
Competition, effect on growth, 53
Compost, 23, 139
'Compreg', 242, 243
Cone: evolution, 78; numbers, 11; variability, 11
Conidendrin, occurrence, 168
Conifer cultivation, history, 136
Conifers, foliage diseases, 45
Connectors, timber, 111
Conservation, *see* Soil conservation: Water conservation
Contour trenching, 23, 74
Co-operatives, 121, 270 (2)
Cork growing: Tunisia, 107; Turkey, 107; U.S.A., 39
Corrosion of metal by wood, 95, 244, 254
Crate-making, 38 (2)
Credit, forestry, 270
Cross ties, *see* Sleepers
Crown type determination in seedlings, 78
Cull determination, 50. *See also* Defects of timber
Cultivation: effect on increment, 233; on development of cankers, 256
Cutting cycles, 201, 264
Cutting licenses, 240
Cutting practices, 85, 269
Cuttings, rooting, *see* Propagation
Cytology, 76 (4), 142, 143 (3), 145, 148, 151 (2)

DECADENT trees, ecological causes, 19
Decay, *see* Rot
Deer, damage control, 194
Defects of timber, 29 (2), 171 (3), 234. *See also* Case-hardening: Cull: Discoloration: Knots: Stain fungi
Deficiency, *see* Fertilizers
Defoliation, 188
Degradation, forest, 3, 139
Demonstration plots, 200 (2)
Dendrochronology, *see* Rings, growth
Diameter growth, measurement, 263
Diameter measurement, 50, 262
Dictionaries, 69
Die-back, 49, 191, 193, 254
Discoloration of wood, 29 (3), 171
Diseases, tree: Canada, 190, 254; Great Britain, 190; Tanganyika, 192; prevention and control, 114. *See also* Fungous diseases: Virus diseases: Insect pests
Distillation, wood, 36, 104 (3), 180, 247
Dormancy of buds, 75
Drainage, forest, 74
Drains, timber, 112
Drought control by weed poisons, 140
Durability of timber, 238
Dusting, *see* Insecticides
Dutch Elm disease, 46, 115 (2), 192 (2), 256 (2)
Dyewoods, 109
Dyeing of fibres, 177; of wood, 177

ECOLOGY and forestry practice, 148, 268
Ecology, forest: Australia, 216, 221; Barbadoes, 137; Brazil, 12; Great Britain, 150; Missouri, 12; Natal, 149; Northern Rhodesia, 271; South Australia, 222–3; Switzerland, 78-9, 221; U.S.S.R., 78; Western U.S.A., 12. *See also* Floras: Forest types: Vegetation types
Edible plants, 39 (2)
Education, forestry, 122, 213
Electronic heating, *see* High frequency
Embryology, 10 (2), 151, 226
Engineer forestry units (U.S.), 121
Erosion, 55, 74, 189, 217 (2)
Erosion control, 7 (2), 73 (3), 140, 161, 205, 217 (2)
Exotics, 88 (6), 159, 214, 225, 229 (3)
Explosives: use in applying insecticides, 115; in forest operations, 187

FARM woodlands: management, 52 (3), 53, 265 (2), 271; reforestation, 162; utilization, 56 (2)
Fats, extraction, 74
Fauna, soil (Ohio), 78
Felling injuries to saplings, 196
Felling of leaning trees, 172
Fence posts, preservation, 104
Fertilizers: basalt and marl, 139; effect on transplants, 73, 161; on seedling survival and growth, 90; on soil conditions, 139; supply in U.S.A., 23. *See also* Compost
Fibre length, factors affecting, 145
Fibreboard, 245 (2)
Fibres, vegetable, 186
Finishing of wood, 35
Fire-damaged timber, 256
Fire detection, 113, 189
Fire: effect on stand composition, 12; on increment, 263; on tree taper, 189, 197
Fire-fighting methods and equipment, 113, 189 (2), 255
Fire hazard, 29; measurement, 43, 112, 256; classification, 240
Fire protection, 44 (3), 113, 188, 189 (2)
Fire resistance of wood, 29, 36, 96
Fire-resistant species, 190
Fire-suppression policy, 189
Fires, forest, 190 (2)
Firebreaks, machinery for clearing, 44
Fireplaces, 188
Fireproofing of timber, 36 (3), 104 (3), 178 (2), 179, 246; effects on glued joints, 36
Floating, *see* Transport of timber
Floccosoids, 29
Floras, general: Argentina, 13; Armenia, 221; Burma, 221; S. China, 224; Colombia, 18; Cuba, 224; India, 221; Mediterranean, 1–3; Mexico, 13, 224; Nandi Hills, 13; New York, 79; Panama, 13, 150; Patagonia, 12; South Australia, 222–3; Texas, 224 (2); Tobago, 79; Virginia, 224; Western Australia, 221–2
Floras, tree: Argentina, 13; Australia, 63–8; Baltimore, 13; S.E. China, 149–50; Great Britain, 223; Kentucky, 221; Lesser Antilles, 79; Missouri, 13; North America, 79
Floras, *see also* Ecology, forest: Forest types: Vegetation types
Flowering: biology, 226; induction, 218
Fodder: cellulose, 100, 176; trees, 109 (3), 110, 125, 186 (5), 252–3; yeast from wood sugar, 182
Foliage, *see* Leaf
Forage utilization, 106
Forest types: Africa (Mangrove), 82; Andamans, 214; Costa Rica, 137; Eire, 213; Latvia, 224; Maine, 221; Mayurbhanj, 149; South Australia, 216; U.S.S.R., 13 (3), 213; Vancouver Island, 51–2. *See also* Ecology, forest: Floras: Vegetation types
Fossil wood, 6, 136, 213 (2)
Frost damage, 112 (3), 188 (2), 240, 254–5
Frost: influence on soil moisture, 7; protection, 112 (3); resistance, 188
Fuel from wood waste, 110, 253
Fuel, liquid, from wood, 105
Fuelwood, 174; calorific value, 27; producer, 31; seasoning, 97; supplies: Kano City, 182; Nigeria 270–1; Sweden, 56; United Provinces, 205; U.S.A., 241; Victoria, 241
Fumigation: insect control, 49, 196; tolerance of conifers, 112
Fungi: as source of food, 80; biochemistry, 225; identification keys, 80; use in chemical industry, 80
Fungicides, 44, 46
Fungous diseases, 44–46, 114–15, 190–93, 224–25, 239–40, 256–59

GALL of Sugar Maple, 192
Galls, insect, 50
Gasification, *see* Producer gas
Genetics, *see* Cytology: Breeding
Germination, *see* Seed
Girders, plywood, 41–2
Girdling, 24, 233
Globulin, isolation, 217
Glossaries: plywood terms, 174; technical forestry terms, 212
Glue identification, 99
Glues, 31 (2); casein, 175, 243 (2); gelatine, 175; ground-nut protein, 243; hot-setting, 99; oilseed cake, 99; resin, 99 (2); synthetic resin, 32, 175 (4), 243; weathering qualities, 175
Gluing methods, 31 (3), 32 (2), 99 (6), 175 (2), 179, 242, 243
Grading of timber, 30, 97
Grading rules, 183, 249–50
Gradoni system of terracing, 163
Grain-slope detector, 96
Grass-burning (West Africa), 112
Grasses: tropical, 83; Uganda, 224
Grazing, forest, 38, 55 (3), 124 (2), 183 (7), 184; ecological effects, 47, 205
Growth: factors affecting, 142, 144; relation to length of fibre, 145; seasonal, 218
Growth forms, 225
Growth substances, use with cuttings, 8 (2), 9, 75, 141, 142 (3)
Growth, *see also* Increment
Gums, 108 (2), 185
Gunstock material, 53
Gutta percha, 109, 183

HANDLES, tool, 106
Hangars, all-timber, 42
Hares, damage to conifers, 47
Harvesting loss, 197
Hauling, *see* Transport of timber
Heatronics, *see* High frequency
Hedge species, 164, 233 (2)
Heteroauxin, 220. *See also* Growth substances
High-frequency heating, 99 (2), 106, 176, 242. *See also* Radio frequency
History, forest: Eire, 5; N. Nigeria, 5
Honey secretion, 144, 252 (2)
Horses, use in logging, 30 (2), 173
Houses, *see* Building construction
Housing, forest, 52, 121
Humidity, atmospheric, effect on furniture, 96
Humus: formation and decomposition, 139, 216; types, 138
Hybridization, 9, 77, 143, 144, 218, 225. *See also* Breeding
Hydrolysis of wood, 105, 181 (4), 245 (2), 248
Hydroponics, use in forestry, 90
Hygroscopic salts, use in seasoning, 179
Hygroscopity of wood, 31

IDENTIFICATION, tree, 153 (2), 223, 225, 226
Identification, wood, 25, 166; keys, 25 (2), 26, 93, 167 (2), 235 (3)
'Impreg', 243
Impregnation, *see* Improved wood
Improved wood, 31, 32, 33, 99 (3), 100 (3), 175 (2), 242, 243, 244; in aircraft construction, 100; fatigue tests, 175, 243
Improvement fellings, 164 (2)
Incompatability in plants, 75
Increment borer, 145
Increment borings and wood discoloration, 29
Increment determination, 51 (2), 119 (3), 199
Industry, forest, rationalization, 173
Inflorescence: classification, 78; induction by strangulation, 142
Inoculation methods, 135
Insect and plant interrelation, 11
Insect attack on felled and manufactured timber, 28, 29, 239 (3); control, 29, 95 (3), 170 (7), 239
Insect pest resistance, bibliography, 115
Insect pests of trees, 47–50, 115–18, 194–96, 214, 227–28, 239–40, 259–62; control: 194 (2), 260, 261; aerial, 47; biological, 115; fumigation, 49, 196. *See also* Insecticides
Insecticides: 102, 117, 195; arsenical, 47, 116; D-D, 118; D.D.T., 194; 'Detal', 116; methyl-bromide, 49; aerial application, 47, 144; application by explosives, 115
Insolation injury, 43, 254
International Centre of Silviculture, 70 (2), 135
International collaboration in forestry, 212
Irregular crops, statistical research, 198

JOINTS: plywood, 31, 32; timber, 36, 42

KEELS, laminated, 182
Kilns: charcoal, 37 (3), 105 (3), 180 (2); plywood conditioning, 243; seasoning, 36, 179 (2), 180 (3)
Knots, 191, 236

LABOUR, forest: living conditions, 52, 121, 122, 202 (2); requirements, 53, 266; research, 121; training, 70

Lac hosts, 185
Lacquers from resins, 35
Laminated structural timbers, 98
Laminated wood, 31, 32, 57–8, 99. *See also* Improved wood
Laminates, paper-base, 175 (2)
Lammas shoots, 142
Land utilization, 124 (6), 205 (3), 216, 270. *See also* Erosion: Grazing: Soil conservation: Water conservation
Latex, *see* Rubber
Law, forest: Eire, 269; Maryland, 123; Massachusetts, 269; Mexico, 55; Nyasaland, 55; Oregon, 55, 204; Switzerland, 123 (2); U.S.A., 55, 123, 204 (3); Venezuela, 123
Leaf: anatomy, 11, 77 (2); coloration, 220; composition, 74, 141; decomposition rates, 11; dwarf, 77; growth and specific forms, 10, 77; structure, effect of shade, 219; weight, 220
Light, effect on increment, 155. *See also* Photoperiodism: Photosynthesis: Radiation
Lightning fires, 112
Lignin: chemistry, 27 (5), 168 (7), 236-7; derivatives, 27, 168; determination, 145, 237; recovery from wood, 102; utilization, 57, 186, 244 (2)
Lignum-vitae, substitutes, 167
Lime, influence on tree growth and nutrition, 138
Litter removal, 262
Log scales, 50 (2), 119, 263
Log-weighing scales, 97
Logging: in Ashanti, 30; in Cameroons, 96, 172; patch system, 264. *See also* Transport of timber
Longevity of plants, 85
Lumber, *see* Timber

Macerating wood, 204
Magnesia, influence on tree growth and nutrition, 138
Management, forest: 20 (2), 51, 52 (3), 53, 86, 119, 120 (2), 156, 199 (3), 263–4, 265; economics, 201; water conservation, 120
Mangrove formations (Africa), 82
Manuring, *see* Fertilizers
Maple syrup, 41, 109
Maps, 121, 216
Maquis, 3
Marking: competitions, 172; training, 30
Masonite process, 245
Matchsticks, treatment of wood, 98
Medicinal plants, 39, 107 (2), 184
Meteorology, forest, 43
Microclimate, *see* Climate, local
Mine timbers, fireproofing, 178. *See also* Pitprops
Minor forest products, 38–41, 106–10, 183–86, 250–53
Mixed plantations, 89 (2), 228
Mixed stands, 86, 124 (2), 229
Moisture content of wood, 95, 236 (2)
Moisture meters, 27, 246
Moisture requirements of plants, 19, 155
Mosaic of American Elm, 47
Mycological changes in wood, 114
Mycorrhizas, 72, 73, 138, 139, 152, 215 (4); bibliography, 72; ectendotrophic, 215; endotrophic, 7; factors affecting formation, 73; silviculture, 72

National Parks, 204
Naturalization, plant (Uruguay), 157
Naval stores, *see* Resin: Turpentine
Needle blight, 45, 188, 191
Needle cast, 45, 190
Needle rust, 114, 190
Needles, conifer: source of fodder, 109; source of textile fibre, 253; source of vitamin C, 107
Nitrated wood, properties, 28
Nomenclature, proposed changes, 15, 83, 212, 226 (2), 227
Nursery practice, 20, 23, 231, 232. *See also* Fertilizers: Propagation: Seed: Seedling: Sowing: Transplanting: Water
Nutrient relationships, 7, 43, 138, 188, 216
Nutrition, plant, 139, 141

Oils: Beechnut, 184, 252; Boronia, 252; Eucalyptus, 63–8, 251; Fir-needle, 108; Mimusops, 251; Palm, 108; Pine-bark, 185; Rosewood, 252; Sandalwood, 251; Styrax, 185; Tea-tree, 252; Tung, 55; essential, 40, 153, 185, 251–2; seed, 40 (3), 108 (2), 185, 251, 252
Ornamental trees, 90 (3); diseases, 259
Ownership, forest, 123, 204

Palm products, 108 (2)
Paper, *see* Pulp
Pasture, *see* Grazing
Pectin, 108, 237
Peeling, *see* Barking
Periodicals, forestry, international catalogue, 69
Phenol substances, 28, 168; control of wood-destroying fungi, 169, 224
Phenology, 155
Phloem necrosis, 193
Photoperiodism, 142
Photosynthesis, 75 (2)
Piling, preservation, 36, 104 (2)
Pioneer species, 12, 216, 233
Pitprop production: in Britain, 37, 248; in Canada, 105
Plant adaptation, 149
Plant and insect interrelation, 11
Plant distribution data, methods of reporting, 148
Plants, distribution, 231
Plantations, 20, 86, 89 (2), 90 (4), 216
Planting costs, 201
Planting machines, 231
Planting stock, 230, 231
Planting technique, 22 (3), 23 (2), 158, 159, 161, 231
Plastics, 32, 33 (2), 102, 168 (2), 176 (2), 177, 244; mechanical properties, 32, 111, 176
Plywood, 32 (2), 98 (2), 174 (4), 242–3; for aircraft, 29, 98 (2), 174; buckling stresses, 242; conditioning chamber, 242; cutting, 32; elasticity, 32; electric heating, 99 (4), 176 (2); fibre-faced, 242; finishing, 175, 177; fireproofing, 246; for houses, 111 (2); for marine craft, 174 (2); for prefabricated buildings, 242; girders, 41; high frequency moulding, 242; joints, 32; mechanical properties, 32, 98; microstructure, 242; plates, 242; railway wagon, 254; reinforced, 174, 254; repairs, 242; specifications, 174 (3), 243; stop-nut, 98; testing, 98; tubing, 98, 174. *See also* Veneers
Plywood terms, glossary, 174
Poisoning of trees, 24, 92, 233
Poles, 38; preservation, 31 (3)
Policy, forest: Canada, 121, 202, 203 (3), 267–8; Chile, 203; Croatia, 54; Eire, 270; Great Britain, 54, 202, 267; India, 266–7; Jamaica, 271; Kenya, 203; Leeward Islands, 121; Mexico, 71; Roumania, 55; Switzerland, 123–4; Trinidad and Tobago, 54, 268
Pollen: analysis, 5 (8), 6, 70, 148, 213 (2), 220; artificial germination, 8; flight, 218; storage, 8, 218
Pollination, 141, 218; artificial, 9
Polymerization, wood, 28
Polyoses, wood, 28
Posts, preservation, 104
Powder-post beetles, 95, 170 (5)
Precipitation, influence of forests, 72, 140, 204, 217, 268
Pre-fabrication, 42 (2), 111, 188, 242
Prehistory, 5 (3), 6 (2), 70, 136
Preservation of timber against: insects, 29, 95 (4), 103, 170 (5), 178 (2), 239–40, 245–6; rot fungi, 169 (3), 177, 258; stain fungi, 103 (2), 169 (2), 178; teredo, 238; termites, 35, 103, 170 (2), 177, 178 (2), 239
Preservation of timber: electrolytic treatment, 104 (2); inspection, 36; in U.S.A., 35, 103 (2); marine piling, 36, 104; poles, 36 (3); posts, 104; sleepers, 35 (2), 103
Preservation plots (India and Burma), 122
Preservatives: asbestos, 239; boric acid, 178; creosote, 34, 35 (2), 103, 104, 177 (2), 178 (2), 238, 245, 248; oil solutions, 34, 178, 239, 245; Osmose toxic, 177; paint, 34; resin, 177; tanalith, 245; water soluble, 35, 103 (4), 177, 178; wood tar, 102; zinc chloride, 258
Preservatives, methods of application, 103, 178; tests, 34
Pres-to-logs, 110
Private forestry, 52, 54, 200, 201, 265, 269
Producer fuelwood, 31
Producer gas, 37, 105 (2), 180, 247–8
Propagation, vegetative, 8 (2), 9 (3), 141 (4), 142 (3), 158, 218 (4), 219
Propagation, *see also* Seed

Properties of wood: chemical, 27–8, 95, 168, 236–7; physical, 26–7, 94–5, 167–8, 235–6; methods of testing, 145
Protected trees (India and Burma), 122
Provenance, 9–10, 142, 143
Pruning, 25, 92 (4), 165 (3), 166 (2), 234 (2)
Pulp and paper industry (Canada), mechanization, 171
Pulp, composition and properties, 33, 244, 245
Pulp production, 33–4, 101–2, 176, 244
Pulp quality, factors affecting, 33, 101 (2), 245
Pulpwood: economic size, 172; quality, 95; species, 102, 152, 176; supplies: Canada, 126; Sweden, 101; U.S.A., 57, 221, 272

RABBITS, damage control, 259
Radiation, 75
Radio frequency heating, 32, 76, 246–247. *See also* High frequency
Radio telephone, 256
Rafting, *see* Transport of timber
Rainfall determination, 7
Rainfall, *see* Precipitation
Rain forest, silviculture, 85
Rayon manufacture, 33
Recreation and forestry, 204
Reforestation, *see* Afforestation: Regeneration
Regeneration: artificial, 21–23, 87–90, 157, 158–63, 214, 229–33; natural, 20–21, 86–87, 157–58, 214, 216, 229
Research institutes: Argentina, 4; Australia, 166; China, 234; Germany, 70, 135; Great Britain, 70 (2), 166; International, 70; S. Africa, 166; Sweden, 4, 76, 145
Research: soil, 72; timber, 93, 166 (4), 234
Research methods, 135 (2), 197 (2), 198, 230
Resin: determination, 145; extraction, 184; lacquers, 35; production, 39, 108; purification, 108; recovery from wood, 102; tapping, 231, 251 (2)
Resin-producing species, 39, 108, 185
Resources, forest: Argentina, 59, 214; Barbados, 137; Canada, 6, 70, 136 (2), 213; Costa Rica, 137; Dominican Republic, 234; India, 72; Mexico, 71; Netherlands, 72; North Africa, 72; Sweden, 125, 136, 205; Ukraine, 214; U.S.A., 7, 71 (2), 136 (3), 137, 213; S. Yukon, 137. *See also* Timber supplies
Respiration, 75, 141
Rings, growth, 51; analysis technique, 51, 198 (4), 199
River training, 74
Roads, forest, 241, 254
Roadside tree planting, 90, 162
Root development, effects on vigour, 43
Root-measuring device, 218
Root system, 219, 231
Roots, culture, 142
Rosin production, 185
Rosin soaps, 39
Rot: butt, 44, 190; crown, 192; dry, 28, 169; green, 114; heart, 46, 115; prevention in aircraft, 95; red, 193; root, 44, 45, 191, 258; stem, 114, 191; white, 193
Rot fungi: cultivation, 80; preservation of timber, 169, 224, 258
Rubber-producing species, 40 (3), 108 (2), 109 (2), 185 (2), 186 (3), 252
Rubber, wild, 38, 40, 186 (2)
Run-off, 217 (2)
Rust fungi, 15, 44 (2), 45, 114 (3), 190, 191, 192, 258

SACCHARIFICATION of wood, 37, 105, 180 (2), 181 (2), 182, 248, 252
Salicylic salicoside, 217
Salicyloylpopuloside, 217
Salt-resistant species, 19
Salvage: fire-damaged timber, 256; windthrown timber, 43
Sample-plot technique, 197, 198 (2), 230, 263
Sample-tree measurement, 197
Sampling methods, 4
Sand-dune fixation, 3, 140
Sapstreak, 257
Sawdust: burner, 41; cement, 41, 42; plaster, 42
Sawing costs, 33
Sawmilling, 171; in Eastern Canada, 33; in New Zealand, 244; in Nigeria, 33; in Sierra Leone, 176; in U.S.A., 176, 244
Saws, 32; maintenance, 100; band, 100, 176; bow, 172; chain, 30, 240; circular, 32, 100; portable mechanical, 172; tube, 106
Sculpture woods, 31
Seasonal changes in trees, 155, 220
Seasoning, 179; air, 36, 104; chemical, 33, 36, 246; electric, 179, 246; kilns, 36 (2), 104, 179 (2), 180 (3), 246 (2); fuelwood, 97; summer-felled timber, 96
Second-growth forest, management, 200
Sections, preparation, 234
Seed: collection, 22, 89, 143, 144, 158, 231; dispersal, 230; extraction, 22; germination, 22 (5), 89, 160 (2); origin, 21, 147 (2), 220; pretreatment, 22 (2), 89, 219, 231, 261; production, 229, 230; quality designation, 21; storage, 22 (2), 158, 159, 160; stratification, 160; testing, 89; weight, 220
Seed-tree cutting, 229, 230
Seedling growth, factors affecting, 9, 198
Seedlings: packing, 161, 231; treatment, 231, 232
Selective cutting, 19, 86 (2), 164, 265; financial aspects, 200
Separation layer, formation, 220
Sesquiterpene, 217
Shade trees, care, 23
Shading, effect on leaf structure, 219
Shelterbelts, 21, 24 (2), 25 (2), 92 (2), 129–34, 140, 165 (2), 233
Shelterwood system, 155
Ship knees, 97
Shrinkage of wood, 26, 94
Silviculture, American, 154
Site quality, 266
Skidding, *see* Transport of timber
Slash disposal, 30, 96, 97, 189, 241
Sleepers, railway, preservation, 35 (2), 103, 106
Snag-falling, 30
Soil analysis, 6 (2), 215; colour classification, 6
Soil conservation: Caribbean area, 124; China, 55, 74; India, 140 (2); S. Africa, 74; S. America, 141; U.S.A., 53, 124; U.S.S.R., 73. *See also* Erosion: Water relations and ground cover: Run-off
Soil fertility, 138, 139 (2), 216; effect of tree-planting, 122
Soil-level changes, effect on trees, 118
Soil map, Australia, 216
Soil moisture, factors affecting, 7, 137; effects of chapparal-burning, 189; effects of frost, 7
Soil permeability, 138 (2)
Soil reaction and plant distribution, 221
Soil surveys, 124, 216
Soil temperature, 215
Sowing, aerial, 160; direct, 159, 231; spot, 89
Space and increment, 230
Spacing, 231
Spindle-growth, 255
Spoil-mound reclamation, 162
Squirrels, damage to conifers, 47
Stain fungi, 169, 238–9; control, 169 (2), 173 (2); transmission, 169
Stand composition, alteration, 86; and yield, 200
Stand conversion, 86
Stand density, 266
Stand height, 197
Stand normality, measurement, 200
Stand tables, 119
Stands: mixed, 86, 124 (2); pure, 124 (2), 156
Standards, forest practice (New England), 199, 265
Standards: plywood, 174; timber, 183, 249–50; timber construction, 250; wood blocks, 249; wooden tanks, 174
State aid for afforestation, 54 (2)
State control of forestry, 54 (2), 202 (3), 240
State forestry, status of civil service, 201
Statistical methods, 69 (2); 209–11
Stocking, irregular, 155 (5), 156 (5)
Storage of timber, 173 (2)
Stream flow, *see* Water conservation
Stump removal, 30
Stumps, utilization for charcoal, 37
Substitute timbers, 25, 96, 167, 241, 248–9
Succession, forest, 150, 221, 225
Suckers, regeneration, 23, 219
Sugar producing species, 41 (3), 252
Sugar, *see* saccharification
Summer felling, 96

Surveying: equipment, 53, 120; methods, 121 (4). *See also* Maps
Surveys: forest, 86, 136, 265; soil, 124
Symbiosis, 215 (2), 217. *See also* Mycorrhizas

TALL oil, 110 (2)
Tanbark, curing, 184, 250; deterioration, 39
Tanks, wooden, 174
Tannin extraction, 39
Tanstuffs, 39, 82; in Belgian Congo, 184; in U.S.A., 250; from *Eucalyptus* spp., 184 (2); from *Hamamelis virginiana*, 105; from Pine bark, 39, 184; from pulpwood, 101; from Wattle bark, 106, 250; from Willow, 250
Tape rule, 50
Taper, effect of fire, 189, 197
Taper tables, 198
Tars, 247
Taxation, forest, 55 (2), 270
Taxonomy, 79, 226, 227 (3); and anatomical structure, 147, 148 (2); and species concept, 151; value of wood anatomy, 167 (2)
Teak-defoliators, 113
'Tegowood', 243
Temperature, effect on strength properties of wood, 95
Teredo-resistant timbers, 16, 25, 171
Teredo control, 238
Terminal shoot, replacement, 77
Terminology, standardization, 25
Termite-resistant timbers, 171
Termites, 154 (2), 170 (3), 171; control, 116, 239
Testing of wood, 234, 236, 238
Textile fibre from Spruce needles, 253
Textile mill accessories, 38, 182, 183
Thinning, 24 (2), 91 (4), 163, 164 (5), 233
Thinnings, utilization, 38, 231
Thornveld, 149
Ties, *see* Sleepers
Timber bending, 33
Timber column, 167
Timber-concrete beams, 42, 188, 254; slabs, 41
Timber construction, 110, 111; specifications, 111; design, 42, 187 (3)
Timber control (Victoria,) 42
Timber cruising, 119
Timber distribution, methods and costs, 111
Timber engineering, 111
Timber industry, bibliography, 4
Timber-line, 149
Timber marketing, 58 (3)
Timber-measuring legislation (Sweden), 197; societies (Sweden), 197
Timber quality, relation to width of crown, 147
Timber-reinforced concrete, 111
Timber supplies, 6, 56 (3), 57 (9), 125 (9), 205 (3), 206 (5), 213 (2), 272. *See also* Resources, forest
Timber trade statistics, 125, 136, 271
Timber weights, 167
Timber, *see* Utilization
Tools: barking, 173; felling, 172 (3); logging, 97, 171, 173 (3); plywood cutting, 32; pruning, 165; scales, 97; thinning, 24; treeplanting, 161. *See also* Saws
Transpiration, 8
Transplanting, 161, 231, 232 (2)
Transport of timber: bundles of pulpwood, 173, 241; floating, 31, 173 (2), 214; rafting, 97; ropeways, 97; skidding, 30; sledge, 241; snow- and ice-ways, 173; tractor, 97
Treated wood, 35. *See also* Improved wood
Tree classification, 19, 265
Tree distribution limits, 12
Tree farms, 53
Truss, timber, 111
Tsetse control, 55, 84
Turpentine, 185
Turpentining, *see* Resin tapping
T.V.A., timber prices and costs, 201

UNDERPLANTING, 163 (2), 259
Unemployment relief, 122, 123
Utilization, wood, 31, 56, 57, 58 (3), 98, 174, 242; aircraft construction, 38 (3), 106 (4), 167; airscrew blades, 106; bridge-decking, 168; chemical apparatus, 28, 100; cooperage, 241; crate-making, 38 (2); distilling columns, 28, 106; footwear, 249; keels, laminated, 182; matches, 242; packing cases, 106, 248, 249; poles, 38; raingutters, 106; sleepers, 106; textile mill accessories, 38, 182, 183, 249; tool handles, 106, 249; tyres, 38, 106; wood wool, 186, 243

VEGETATION types: Alberta, 79; America, tropical, 149; Armenia, 221; Germany, 78; Hawaii, 150; Natal, 149; Niger Colony, 14; North Carolina, 14; South Australia, 22–3; S. Russia, 213–4; Switzerland, 221. *See also* Ecology, forest: Floras: Forest types
Veneer thickness conversion table, 98
Veneers in aircraft construction, 32. *See also* Plywood
Virus diseases, 47, 193, 259
Vitamin C from needles of conifers, 167; in Walnuts, 250
Volume, calculation, 50 (3), 119 (3), 262 (3), 263
Volume growth, prediction, 263
Volume tables, 50, 198, 262

WAR damage (Finland), 126, 262
Waste wood, utilization, 30, 41 (5), 110 (2), 186, 187 (5), 253 (6), 254
Water conservation, 55, 73, 74 (2), 120, 122, 140 (2), 205, 217. *See also* Precipitation: Run-off
Water régime of broadleaf trees, 8
Water relations and ground cover, 54, 122, 140 (3), 205, 216 (2), 217
Water: plantation trees, 91; seedlings, 232, 267
Wax, 55
Weather phenomena, 6
Web blight, 193
Weed eradication, 113
Weed killers, 159
Weed-trees, eradication, 24, 92, 233
Weeding, 23
Wildlife: management, 110, 186, 251; protection of forests, 193, 194 (2), 259
Wilt: Mimosa, 193; Oak, 115, 192 (2)
Wind damage, 255
Windthrown timber: insect attacks, 28; salvage, 43
Winter hardiness of conifers, 112
Wood-boring insects, 170
Wool, wood, 186, 243
Wound dressings, 196, 232, 257

XANTHOPHYLL determination, 217

YEAST from wood sugar, 182
Yeast growth substances in wood, 27
Yield: conifers, 199; mixed and pure stands, 199; tables, 119, 199 (3), 263

ZINC spraying, 255

GEOGRAPHICAL INDEX

Africa, North: forest resources, 72
Andaman Islands: forests, 214
Argentina: flora, 13; forest resources, 59, 214
Armenia: ecological survey, 221
Australia: Eucalypt forests, 63–8; soil map, 216; war-time timber production and supply, 272–3

Belgian Congo: timber industry, 59
Brazil: essential oils industry, 153; phytoecology, 12; pulp and paper industry, 207; wood distillation industry, 104
British Columbia: lumber industry, 206
British Empire: timber supplies and utilization, 57

Cameroons: timber exploitation, 172
Canada: forest resources, 70; forest policy, 121, 202, 203; forest production 1942, 136; lumber industry, 58
Caribbean area: conservation policy 124
Central Provinces, India: forest policy, 202
Chile: forest policy, 203; forest statistics, 207
China: floras, 82, 149; soil conservation, 7
Croatia: forest policy, 54
Cyprus: erosion control, 217
Czechoslovakia: forest statistics, 120; timber production, 59

Denmark: forest production, 1942–43, 59, 207
Dominican Republic: forest resources, 235

Eire: afforestation policy, 270; forest conditions, 213; forest history, 5
Europe: softwood timber supply, 271; wood exporting areas, 272

Finland: forest production, 1943–44, 59; war damage, 126, 262

Great Britain: forest policy, 54, 200, 202, 267; taxation of woodlands, 270; timber industry, 136; timber supply, 1943, 56

Hawaii: vegetation zones, 150

India: erosion and forestry, 73; forest policy, 267
Indiana: afforestation law, 124

Jamaica: forest programme, 271

Latin America: forest surveys, 60; timber position, 57
Lesser Antilles: trees and shrubs, 79
Louisiana: forest resources, 6

Maryland: Forest Conservancy Districts Act, 123
Massachusetts: Forest Cutting Practices Law, 269
Mediterranean region: flora, 1–3
Mexico: flora, 13; forest law 1943, 55; forest resources, 71; post-war timber prospects, 206; sawmill statistics, 126
Michigan: timber supplies, 57

Netherlands: forest economy and timber supply, 72
New Zealand: timber production, 272
Nigeria: forest statistics and land utilization, 270; tsetse control, 84–5
North Carolina; forest resources, 71
Northern Rhodesia: ecological survey, 271; timber supplies, 125
Norway: forestry under German occupation, 205
Nyasaland: forest ordinance, 54; water conservation, 74

Ohio: forest resources, 136
Oregon: forest laws, 204; forest resources, 136; pulpwood supplies, 71

Panama: flora, 13, 150
Patagonia: phytogeography, 12
Peru: flora, 17; war-time timber industry, 127
Punjab: soil conservation, 140

Quebec: forest statistics, 6, 136; forestry conditions, 72, 203
Queensland: timber supplies, 57

Rhode Island: forest survey, 265
Roumania: afforestation plan, 55; forest production, 1942–43, 60

Scotland: land utilization, 124
Slovakia: timber trade, 206
South Africa: erosion and soil conservation, 74; timber supplies, 57, 206
South Australia: ecology, 222–23; soil and land-use survey, 216; timber supplies, 57
Southern Rhodesia: Teak (*Baikiaea plurijuga*) survey, 265
Sweden: fuelwood inventory, 56; forest surveys, 136; pulp and paper situation, 101; timber exports, 60, 206, 208; timber resources, 125, 205
Switzerland: forest policy, 123; forest production, 128; forest statistics, 1940, 70

Trinidad and Tobago: forest policy, 54; natural vegetation (Tobago), 79

United Provinces, India: fuel supplies, 205
United States of America: forest law, 55, 123, 204; fuelwood supplies, 241; plywood production, 61, 174; pulpwood supplies, 57, 128; soil conservation, 7; timber industry, 128; war-time timber production, 125, 206
United States, Southern: forest resources, 213
U.S.S.R.: soil conservation, 73, 140; timber economy in Ukraine, 214

Venezuela: forest law, 123
Victoria: fuelwood consumption, 241; timber supplies, 57

Washington: forest resources, 136; pulpwood supplies, 71; timber inventory, 136
West Africa: land utilization, 270; manpower and forestry, 272
Western Australia: ecological survey, 221–22; timber supplies, 125
Windward Islands: forest policy, 268

Yukon, Southern: forest resources, 137